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Additional Oversight of Remote Patient Monitoring in Medicare Is Needed

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Additional Oversight of Remote Patient Monitoring in Medicare Is Needed

Why OIG Did This Review

- Medicare broadly covers remote patient monitoring of health data for any chronic or acute condition.
- The use of remote patient monitoring has the potential to greatly expand in the Medicare population.
- As a result, there is an increasing need to know how remote patient monitoring is being used, including who is receiving it and for what conditions, as well as a need to identify any vulnerabilities that may limit the oversight of these services.

Remote patient monitoring allows a patient to collect their own health data (e.g., blood pressure) using a connected medical device that automatically transmits the data to their provider. The provider then uses these data to treat or manage the patient's condition.

What OIG Found

Taken together, our findings demonstrate the need for additional oversight to ensure that remote patient monitoring is being used and billed appropriately.

The use of remote patient monitoring in Medicare increased dramatically from 2019 to 2022.

About 43 percent of enrollees who received remote patient monitoring did not receive all 3 components of it, raising questions about whether the monitoring is being used as intended.

OIG and CMS have raised concerns about fraud related to remote patient monitoring.

Medicare lacks key information for oversight, including who ordered the monitoring for the enrollee.

What OIG Recommends

OIG recommends that CMS take the following steps to strengthen oversight of remote patient monitoring:

1. Implement additional safeguards to ensure that remote patient monitoring is used and billed appropriately in Medicare.
2. Require that remote patient monitoring be ordered and that information about the ordering provider be included on claims and encounter data for remote patient monitoring.
3. Develop methods to identify what health data are being monitored.
4. Conduct provider education about billing of remote patient monitoring.
5. Identify and monitor companies that bill for remote patient monitoring.

CMS concurred with or stated that it would take into consideration all our recommendations.

Primer on: Remote Patient Monitoring in Medicare

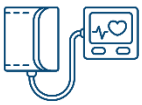
What is remote patient monitoring?

Remote patient monitoring is the collection and transmission of health data—such as blood pressure, weight, or glucose levels—in a patient's home that providers **use to remotely monitor** a patient's health status and manage a patient's condition.

An example of remote patient monitoring in Medicare:

A Medicare enrollee **has high blood pressure** (hypertension).

The enrollee's provider determines that remote patient monitoring is **medically necessary** to treat his hypertension and the enrollee **consents** to receiving it.



The provider **supplies a connected blood pressure cuff** to the enrollee.

The provider **educates** the enrollee on **how to use and set up** the connected blood pressure cuff.

The enrollee **regularly uses the device to collect his blood pressure readings** and **the device automatically transmits the data** to his provider.

The provider then **reviews the data**, **makes decisions about** the enrollee's **treatment**, and **communicates with the enrollee**. For example, the provider may decide that the enrollee's blood pressure medication needs to be adjusted and calls him to discuss this change.

Primer on: Remote Patient Monitoring in Medicare

How is remote patient monitoring covered in Medicare?

Medicare began covering remote patient monitoring in 2018 and also refers to it as "remote physiologic monitoring."

Medicare covers remote patient monitoring for the **collection of any type of physiologic data** using a **wide range of medical devices**, for **chronic and acute conditions**.

Providers bill Medicare for remote patient monitoring services **using a general set of procedure codes**. These codes represent different components of the monitoring. Medicare does not require that remote patient monitoring services be ordered by a physician or other qualified health care provider or that information about an ordering provider be included on the claim.

There are **three main components**—education and setup, device supply, and treatment management—of remote patient monitoring. Medicare pays for each of these components separately and pays the same rate regardless of the type of device used or health data collected.

To use remote patient monitoring in Medicare fee-for-service, an **enrollee must**:

Have a **chronic or acute condition** that requires monitoring.

Use an internet-connected device that meets the Food and Drug Administration definition of a medical device and digitally uploads data.[1]

Collect and transmit health data at least **16 days every 30 days**.[2]

FINDINGS

This data brief provides key insights about the use of remote patient monitoring in Medicare and identifies vulnerabilities in CMS's ability to oversee these services.[3]

This information can help CMS and other stakeholders prevent Medicare dollars from being misspent and better protect Medicare enrollees and the program from fraud, waste, and abuse. The information may also be useful to CMS and other stakeholders as they make future decisions about the coverage and oversight of remote patient monitoring services.

The use of remote patient monitoring in Medicare increased dramatically from 2019 to 2022

The number of Medicare enrollees who received remote patient monitoring was more than 10 times higher in 2022 than in 2019.[4]

In 2022, slightly more than 570,000 enrollees received remote patient monitoring, compared to about 55,000 in 2019.

Remote patient monitoring increased in both traditional Medicare and Medicare Advantage. In traditional Medicare, the number of enrollees was 9 times higher in 2022 than in 2019, whereas in Medicare Advantage the number of enrollees was 14 times higher.[5]

The number of enrollees who received remote patient monitoring was more than

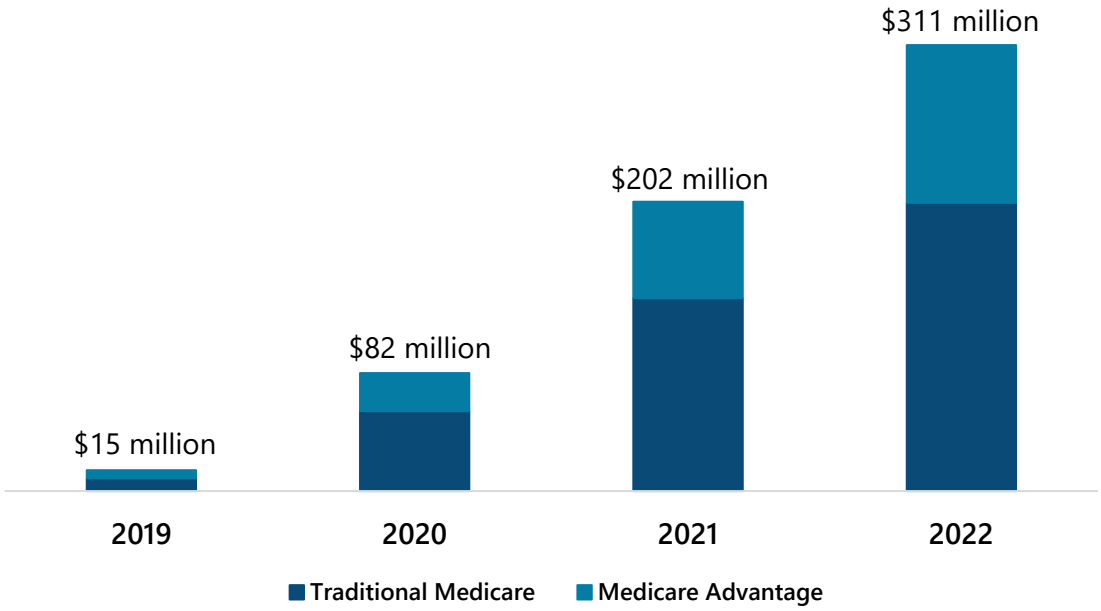
10 times higher

in just 4 years.

Payments for remote patient monitoring in Medicare were more than 20 times higher in 2022 than in 2019. In 2022, payments for remote patient monitoring in traditional Medicare and Medicare Advantage were more than $300 million, compared to just $15 million in 2019.[6] See Exhibit 1.

Payments increased substantially in both traditional Medicare and Medicare Advantage. In traditional Medicare, payments increased from $9 million in 2019 to $201 million in 2022, while payments for those in Medicare Advantage grew from $6 million in 2019 to $110 million in 2022.[7] In both programs, payments were driven by an increase in not only the number of enrollees using remote patient monitoring but also the average payment per enrollee.

Exhibit 1: Payments for remote patient monitoring in Medicare were more than 20 times higher in just 4 years



Source: OIG analysis of Medicare claims and Medicare Advantage encounter data, 2024.

The average payment per enrollee doubled. In total, payments in traditional Medicare and Medicare Advantage averaged $545 per enrollee for remote patient monitoring in 2022, up from $266 per enrollee in 2019. This increase was, in part, due to an increase in the amount of time enrollees received remote patient monitoring.

Enrollees in both traditional Medicare and Medicare Advantage received remote patient monitoring for longer periods of time, on average, in 2022 than in 2019. In 2022, enrollees received remote patient monitoring for an average of more than 5 months. This is an increase from less than 3 months in 2019. The percentage of enrollees who received remote patient monitoring long term (i.e., longer than 9 months) also increased. In 2022, 25 percent of enrollees received monitoring long term, whereas in 2019 just 5 percent of enrollees received it long term. Medicare has no limit on the length of time an enrollee can be monitored.

The vast majority of enrollees received remote patient monitoring to treat chronic conditions, most often hypertension

The vast majority (94 percent) of enrollees received remote patient monitoring to treat chronic conditions in 2022. Far fewer enrollees (about 7 percent) received remote patient monitoring to treat an acute condition.[8]

More than half of enrollees who received remote patient monitoring received it for hypertension. The next most common conditions were diabetes with and without complications, which accounted for 15 percent of enrollees who received monitoring, followed by sleep-wake disorders (5 percent). See Appendix A for more detailed information about enrollees' conditions and Appendix B for information about the types of providers.

Remote patient monitoring is likely to continue to grow, given that more than 60% of all Medicare enrollees have hypertension, yet a very small fraction of these enrollees currently receive it.[9]

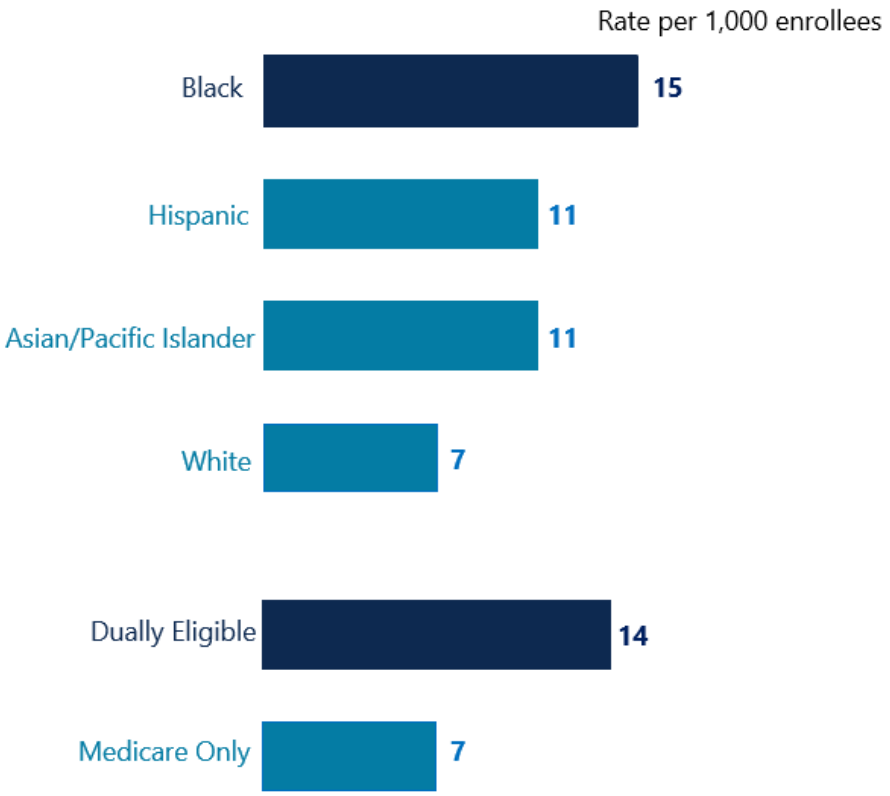
Black enrollees and those dually eligible for Medicare and Medicaid received remote patient monitoring at higher rates than other groups

Certain groups of enrollees were more likely to receive remote patient monitoring than other groups, which may be related to their higher prevalence of chronic conditions.

Specifically, Black enrollees in Medicare received remote patient monitoring at a higher rate than other groups. See Exhibit 2. They are also more likely to have two or more chronic conditions, such as hypertension, than other racial or ethnic groups.[10]

Additionally, enrollees who are dually eligible for Medicare and Medicaid received remote patient monitoring at twice the rate of enrollees with only Medicare. Dually eligible individuals are enrolled in Medicare due to age or disability and in Medicaid due to income. These enrollees typically have lower incomes and a higher prevalence of chronic conditions than enrollees with only Medicare.[11]

Exhibit 2: Black enrollees and those dually eligible for Medicare and Medicaid received remote patient monitoring at higher rates than those in other groups in 2022.



Source: OIG analysis of Medicare claims and Medicare Advantage encounter data, 2024.

Among other demographic groups, enrollees generally received remote patient monitoring at similar rates. See Appendix C for more information about the use of remote patient monitoring for other groups.

Approximately 43 percent of enrollees who received remote patient monitoring did not receive all 3 components of the monitoring, raising questions about whether the monitoring is being used as intended

Remote patient monitoring consists of three main components, each a separate step in the monitoring process.[12] According to CMS, each component builds off the step before it.[13] This process begins with educating the patient and supplying the remote monitoring device, and then is followed by the provider using the patient's health data to manage their treatment. Together, these three components are intended to

enable providers to remotely manage their patient's conditions. The three components are:

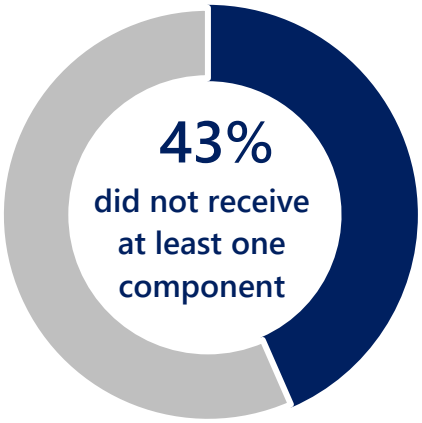
Enrollee education and device setup: Education about how to use the device and transmit the health data helps to ensure that enrollees use the device appropriately and collect accurate data.[14]

Device supply: The internet-connected device, including the collection and transmission of at least 16 readings every 30 days, ensures that the appropriate health information is supplied to the provider.[15] Examples of these devices include connected blood pressure cuffs, weight scales, and pulse oximeters. Without the connected device or an adequate number of readings, providers may be left with insufficient or no data to make informed treatment decisions.

Treatment management: Treatment management ensures that the provider reviews the health data and uses it to manage the patient's condition.

Yet, 43 percent of enrollees who received remote patient monitoring did not receive at least one of the 3 components.[16] In total, approximately 244,000 enrollees did not have a claim or encounter record for at least one component in 2022. About 113,000 of these enrollees did not have a claim or encounter record for two components. See Exhibit 3. Although CMS does not require that providers bill for all three components, the high percentage of enrollees who did not receive all components raises questions about whether these services are being used as intended.

Exhibit 3: Approximately 43 percent of enrollees who received remote patient monitoring did not receive all 3 components of monitoring



Source: OIG analysis of Medicare claims and Medicare Advantage encounter data, 2024.

Most commonly, enrollees did not receive education and setup or the device. In these cases, the enrollee either did not receive education about how to use their device or support setting it up; did not receive a connected device from their provider; or did not take and transmit readings of their health data on at least 16 days in any month of the year.[17] These components are critical, as they help to ensure that enrollees collect and transmit accurate health

data, and that providers have sufficient health data to make informed treatment decisions.

In total, about 28 percent of enrollees who received remote patient monitoring did not have a claim or encounter record for education and setup, while about 23 percent did not have a claim or encounter record for a device.[18]

A total of 12 percent of enrollees did not receive treatment management. Raising concern, these enrollees never had a claim or encounter record for treatment management from any provider in 2022. If patients do not receive any treatment management—which is at least 20 minutes of management services for a patient's treatment plan, including at least one conversation between the provider and the patient—they may not receive the full benefit of the monitoring. Additionally, enrollees not receiving treatment management raises concerns that the monitoring may not have been necessary to treat the enrollee's condition.

OIG and CMS have raised concerns about fraud related to remote patient monitoring

In a November 2023 Consumer Alert, OIG raised concerns about unscrupulous companies signing up Medicare enrollees for remote patient monitoring, regardless of whether they need these services.[19] These companies make unsolicited contact with enrollees using (e.g., calls, texts, or internet ads) and sign them up for remote patient monitoring. Most often, the monitoring never happens, but the company bills for remote patient monitoring anyway.

CMS also reported that it has identified risks related to companies "cold calling" enrollees to solicit them for a remote patient monitoring device, without the company having information to support the enrollee's need for the device. Other risks include companies providing devices but not having sufficient staff to properly monitor enrollees, not monitoring for as many hours as are being billed, or not training enrollees to use the devices.

Further, Medicare does not have a systematic way to identify companies that specialize in remote patient monitoring. Medicare does not consider remote patient monitoring companies to be a type of provider.[20] Having information could help CMS better understand how common program integrity issues, such as inappropriate billing, are with companies specializing in remote patient monitoring, and help it address these program integrity risks.

About 1 in 10 enrollees who had monitoring received it from a company that appeared to specialize in remote patient monitoring.

Medicare lacks key information for oversight of remote patient monitoring

Medicare lacks critical information about the remote patient monitoring it pays for, which creates challenges for oversight.

Medicare lacks information about the types of health data being monitored and the types of devices enrollees use

Medicare does not have any information about the types of health data that are being collected and monitored. Similarly, it does not have any information about the types of devices that enrollees use. In both traditional Medicare and Medicare Advantage, providers use general procedure codes to bill for remote patient monitoring that indicate only which component of remote patient monitoring was provided (e.g., the device or treatment management). The codes do not include more detailed information, such as the type of device. See the textbox.

Medicare does not have key information about remote patient monitoring services.

- It has no information about the types of health data being collected. These data could include blood oxygen levels, respiratory flow rate, or blood pressure, among other types.
- It has no information about the types of devices that are being used. These devices could be connected blood pressure cuffs, weight scales, or glucose monitors, among other devices.
- This lack of information inhibits Medicare from determining whether the services meet program requirements.

This lack of transparency limits CMS's ability to ensure that remote patient monitoring services meet requirements. For example, without additional information about the types of health data being monitored, CMS cannot ensure that it is paying for remote monitoring of physiologic data (as opposed to nonphysiologic data) as required. The lack of this information also inhibits CMS's ability to assess the effectiveness of remote patient monitoring and make any necessary changes to coverage in the future.

In some cases, Medicare lacks information about what disease or condition is being monitored

Medicare requires that remote patient monitoring be used to treat an acute or chronic condition. Yet, Medicare does not always have information about what condition is being monitored. For example, more than 7,000 enrollees received remote patient monitoring for "other specified counseling." See the textbox for additional examples.

Some enrollees received remote patient monitoring for a diagnosis that did not specify the actual condition being monitored. This includes:

- more than 7,000 enrollees with the diagnosis of "other specified counseling,"
- more than 500 enrollees with the diagnosis of "other specified health status," and
- about 400 enrollees with the diagnosis of "encounter for examination and observation for other specified reasons."

When remote patient monitoring is billed with diagnosis codes that do not indicate a specific disease or condition, CMS does not have enough information to analyze whether the services were used appropriately and aligned with enrollees' medical needs.

Medicare frequently lacks information about the provider who ordered the remote patient monitoring

Medicare does not have an explicit requirement that remote patient monitoring must be ordered or that the ordering provider (e.g., a physician or other qualified health care professional) be listed on the claim.[21] As a result, for about 44 percent of enrollees, Medicare did not have any information about who ordered their remote patient monitoring services.

The ordering provider is a critical piece of information for preventing and detecting fraud and abuse. Without information about ordering providers, CMS's ability to determine whether services are medically necessary and to identify patterns of high-risk billing is also limited. In addition, the lack of information about the ordering provider raises questions about whether enrollees' monitoring is being coordinated with their other health care.

Medicare requires that other types of items and services be ordered by a physician or other eligible health care provider and that the provider's identification number be listed on Medicare claims.[22] These items and services include durable medical equipment, laboratory services, imaging, and home health services.[23] CMS uses the ordering

provider information on these claims as a part of its analyses to identify actual or potential payment errors and fraud related to these services.

Medicare also lacks information about who is delivering the remote patient monitoring

Medicare does not always require that claims and encounter records for remote patient monitoring list the provider who delivers the service. Instead, a supervising provider may list their own identification number on the claim when their staff deliver the service.[24] (See the text box.) This practice is known as "incident to" billing and can be used in both traditional Medicare and Medicare Advantage for a variety of health care services, including remote patient monitoring.

"Incident to" billing of remote patient monitoring

- Under "incident to" billing, supervising providers may list their identification number on the claims for remote patient monitoring services when their staff deliver these services.
- Both non-clinical (e.g., office staff) and clinical staff (e.g., a registered nurse) can deliver remote patient monitoring education and device supply, while only clinical staff can deliver treatment management.
- Supervising providers are responsible for training the staff about remote patient monitoring; however, they are not required to be at the same location as the staff.[20]

Prior OIG work raised concern that "incident to" billing creates challenges for oversight.[25] "Incident to" billing allows multiple individuals to deliver services under a single identification number. As a result, CMS does not always know who delivered the services or even how many individuals delivered services.

This lack of transparency hinders CMS's ability to detect fraud, waste, and abuse related to remote patient monitoring. For example, "incident to" billing hinders CMS's ability to determine whether a provider is billing for a reasonable number of services. In one case, a single provider billed 23,569 hours of treatment management for remote patient monitoring in 2022, far more hours than in the year. However, because CMS does not know how many individuals delivered these services, it cannot determine whether this is an unreasonable number of hours.

CMS data also lack information about which remote patient monitoring services were delivered "incident to." CMS does not require claims and encounter data to contain a modifier to indicate when "incident to" billing occurred, and the provider did not directly deliver the service. Having this information could improve oversight of remote patient monitoring services.

RECOMMENDATIONS

Remote patient monitoring has grown dramatically in Medicare in the past few years. Further, the potential for continued growth exists as remote patient monitoring is most often used to treat hypertension—one of the most common conditions among Medicare enrollees.

At the same time, a number of concerns exist about remote patient monitoring. Approximately 43 percent of enrollees who received remote patient monitoring did not receive a key component of the monitoring, raising questions about whether the monitoring is being used as intended. Additionally, OIG and CMS have identified risks related to unscrupulous companies signing enrollees up for remote patient monitoring that they do not need.

Further, a lack of transparency in billing for remote patient monitoring hinders oversight. Medicare currently lacks complete information about the types of health data that enrollees are collecting and transmitting, what diseases or conditions are being monitored, and who ordered and delivered the remote patient monitoring.

Taken together, these findings demonstrate the need for additional oversight and safeguards to help to ensure that remote patient monitoring is being used and billed appropriately. Further, the findings call for additional action. They provide further support that CMS should implement a recommendation from a prior OIG report to improve transparency of "incident to" billing.[27] Therefore, we reiterate our prior recommendation (see text box) and make several new recommendations to CMS to augment the safeguards CMS and its contractors already have in place, such as payment edits.[28] In addition, to further inform oversight, OIG has additional work underway examining remote patient monitoring, including a companion evaluation that will identify billing patterns that may indicate fraud, waste, and abuse.[29]

We continue to recommend that CMS improve the transparency of "incident to" services.

- Under "incident to" billing, CMS allows providers to use their own identification number for remote patient monitoring that was delivered by clinical staff or, in some circumstances, non-clinical staff.
- CMS should require the use of a modifier to indicate "incident to" services on Medicare claims and encounters.
- In addition, CMS should take steps to allow providers to report the identification number of the staff who delivered the service, when available.

We recommend that CMS:

Implement additional safeguards to ensure that remote patient monitoring is used and billed appropriately in Medicare

Although CMS has taken a number of steps to address risks related to remote patient monitoring, it should take additional actions to further protect Medicare enrollees and the program from fraud, waste, and abuse.

Specifically, CMS should conduct periodic analysis to identify providers who frequently bill for enrollees who do not receive all the components of remote patient monitoring, especially providers who bill for enrollees who never receive treatment management. If an enrollee never receives treatment management, it raises question about the necessity and benefit of receiving remote patient monitoring. CMS should then conduct additional followup on these providers, as appropriate.

In addition, CMS should work to ensure that Medicare is paying for remote patient monitoring that is appropriate. For example, CMS should conduct analysis to identify providers who frequently submit Medicare claims with diagnosis codes that do not represent a chronic or acute condition, such as the code for "other specified counseling" and take action, as appropriate. Identifying and following up with these providers would help to ensure that Medicare is only paying for remote patient monitoring for appropriate diagnoses.

CMS should also work with Medicare Advantage plans to ensure that they have appropriate safeguards in place. Ensuring that Medicare Advantage plans have appropriate safeguards will help protect these enrollees from fraud, waste, and abuse.

Require that remote patient monitoring be ordered and that information about the ordering provider be included on claims and encounter data for remote patient monitoring

The ordering provider identification number is a critical piece of information for preventing and detecting fraud and abuse. Without information about the ordering provider, CMS's ability to detect and prevent fraud schemes is hindered.[30]

CMS should require that all remote patient monitoring services be ordered by a physician or other qualified health care professional and that information about the ordering provider be included on claims and encounter data for remote patient monitoring.[31] This requirement will help to ensure that Medicare enrollees receive remote patient monitoring services that are necessary and appropriate. It will also help to ensure that CMS and other oversight agencies are able to detect and prevent fraud, waste, and abuse. In addition, identification of the ordering provider may also help to identify whether patients' monitoring is coordinated with their other health care.

Develop methods to identify what health data are being monitored

Medicare covers remote patient monitoring for the collection of any type of physiologic data using a wide range of medical devices. Yet, providers use general procedure codes to bill Medicare for remote patient monitoring that do not indicate the type of health data being collected (e.g., blood pressure or weight) or the type of device that is used. Without this specific information in the claims and encounter data, CMS is unable to identify the types of monitoring in Medicare billing. Additionally, this lack of information inhibits CMS's ability to conduct oversight and ensure that remote patient monitoring is used appropriately. For example, CMS cannot determine whether the data being collected are physiologic data (as opposed to non-physiologic data).

CMS should implement methods to collect further information about the types of monitoring it is paying for, such as the creation of new HCPCS procedure codes or modifiers to identify health data being collected. Alternatively, CMS could collect information on the types of devices.[32] Having this information will improve CMS's ability to oversee remote patient monitoring services.

Conduct provider education about billing of remote patient monitoring

Educating providers is an important way to help ensure billing is appropriate, especially when services are relatively new. Yet, there are currently no comprehensive national educational resources available to providers from CMS specifically focused on appropriate billing of remote patient monitoring. This may lead to gaps in understanding.

CMS should conduct provider education to address any gaps in understanding about how to bill for remote patient monitoring appropriately. To do this, CMS could, for example, issue provider education materials specific to remote patient monitoring, such as a Medicare Learning Network publication.

This education should summarize billing guidelines for remote patient monitoring and include information on any safeguards for remote patient monitoring, as recommended above. The educational materials should explain that the diagnoses included on claims for remote patient monitoring should clearly indicate what condition is being treated and that the claims should include an ordering provider.

The educational materials should also include information about the use of remote patient monitoring. For example, they should emphasize the purposes education, device supply, and treatment management have in managing health conditions.

Additionally, the materials should emphasize the importance of coordinating the remote patient monitoring information with the ordering provider and the enrollee's other health care. Making sure that the remote patient monitoring information is

integrated into the enrollee's treatment is critical to realizing the benefit of these services.

Identify and monitor companies that bill for remote patient monitoring

OIG has raised concerns about unscrupulous companies signing up Medicare enrollees for remote patient monitoring, regardless of whether they need these services.

It is important for CMS to be able to provide effective oversight of companies that bill for remote patient monitoring.[33] To do this, CMS should first develop a method to identify companies that specialize in remote patient monitoring. This could include developing a provider enrollment classification for companies who primarily deliver remote patient monitoring services. Alternatively, CMS could use data analysis to identify these companies.

CMS should then use these data to monitor companies to help ensure that they are billing appropriately.

AGENCY COMMENTS AND OIG RESPONSE

CMS concurred with or will take into consideration all our recommendations.

CMS concurred with our recommendation to implement additional safeguards to ensure that remote patient monitoring is used and billed appropriately in Medicare. CMS stated that it uses a robust program integrity strategy to reduce and prevent Medicare improper payments and that it will take OIG's findings and recommendation into consideration when determining any appropriate next steps.

CMS stated that it will take into consideration our findings and recommendation that remote patient monitoring be ordered, and that this information be included on claims and encounter data. CMS noted that this recommendation will require notice and comment rulemaking.

CMS stated that it will take into consideration our findings and recommendation that it develop a method to identify what health data are being monitored. CMS noted that this recommendation may require notice and comment rulemaking.

CMS concurred with our recommendation to conduct provider education about billing of remote patient monitoring. CMS stated that it will continue to educate health care providers about billing of remote patient monitoring in accordance with existing payment policies.

CMS concurred with our recommendation to identify and monitor companies that specialize in remote patient monitoring. CMS stated that it uses a robust program integrity strategy. As a part of this strategy, CMS has developed ways to assist with identifying health care providers billing for remote patient monitoring services and that it will take OIG's findings and recommendation into consideration when determining any appropriate next steps.

For the full text of CMS's comments, see Appendix D.

METHODOLOGY

We based this data brief on an analysis of Medicare fee-for-service (i.e., traditional Medicare) claims from the National Claims History File and Medicare Advantage encounters from the Part C Encounter data. We also used data from the Medicare Enrollment Database and the National Plan and Provider Enumeration System.

Enrollees Receiving Remote Patient Monitoring

We identified claims and encounter records for remote patient monitoring with dates of service from January 1, 2019, through December 31, 2022. We included claims and encounters billed with one or more remote patient monitoring procedure codes (i.e., Current Procedural Terminology codes: 99091, 99453, 99454, 99457, and 99458). These services are also referred to as "remote physiologic monitoring."

Using these data, we determined the number of enrollees who received remote patient monitoring services from 2019 through 2022. We also calculated the total amount paid by traditional Medicare and Medicare Advantage plans for remote patient monitoring services, as well as the average amount Medicare paid per enrollee, in each year.[34] In addition, we calculated the average length of time enrollees received remote patient monitoring from 2019 through 2022.

Conditions for Which Enrollees Received Remote Patient Monitoring

Next, we determined the types of conditions enrollees received remote patient monitoring for in 2022. We based this analysis on the primary diagnosis codes on claims and encounter records for remote patient monitoring services. We determined the number of enrollees who received remote patient monitoring for each diagnosis code and the overall proportion of enrollees who received monitoring for chronic and acute conditions.[35] We also identified diagnosis codes that were not considered chronic or acute conditions.

Characteristics of Enrollees Receiving Remote Patient Monitoring

We analyzed the use of remote patient monitoring among groups of enrollees with different characteristics. We used information from the Medicare Enrollment Database and conducted analysis for the following characteristics: age, sex, race and ethnicity, dual eligibility status, and urban or rural location.[36]

Note that Medicare data combine race and ethnicity and allow for only one response.[37] The data are limited to seven options: American Indian/Alaska Native, Asian/Pacific Islander, Black (or African American), Hispanic, Non-Hispanic White, Other, and Unknown. The data are not further disaggregated. Although this information is currently the best available for the entire Medicare enrollee population,

comparisons to self-reported data (available in certain, limited circumstances) show that race and ethnicity is still misclassified for some enrollees. Because of these limitations and small enrollee populations in the data, we did not provide specific data for American Indian/Alaska Native enrollees or enrollees with other or unknown race and ethnicity.

Components of Remote Patient Monitoring Received by Enrollees

We determined the number and proportion of enrollees who never received each of the three components of remote patient monitoring in 2022 from any provider. We considered the three components to be: (1) education and setup (CPT code 99453); (2) device supply (CPT code 99454); and treatment management (CPT codes 99091, 99457, or 99458).[38]

Companies that Appear to Specialize in Remote Patient Monitoring

We first identified the providers who delivered remote patient monitoring to Medicare enrollees in 2022. We based this analysis on the rendering provider on the claims and encounters for remote patient monitoring. We then used provider specialty information from the National Plan and Provider Enumeration System to determine the most common types of providers who delivered remote patient monitoring.

Next, we identified the companies that appeared to specialize in remote patient monitoring. We based this analysis on the billing provider on the claims and encounters for remote patient monitoring. We identified billing providers that had a high proportion of their Medicare billing as remote patient monitoring. We also reviewed information about the billing provider in the National Plan and Provider Enumeration System and conducted Internet searches to further identify those that appeared to be companies specializing in remote patient monitoring. In total, we identified 41 companies that appeared to specialize in remote patient monitoring. We then determined the proportion of enrollees who received monitoring from one of these companies.

Limitations

This analysis is based on analyses of Medicare claims and encounter data. We did not conduct a medical record review.

In addition, the analysis related to race and ethnicity is based on the best available information; however, there are limitations to these data. For a fuller discussion, see OIG, *Inaccuracies in Medicare's Race and Ethnicity Data Hinder the Ability To Assess Health Disparities*, OEI-02-21-00100, June 2022.

Standards

We conducted this study in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

APPENDIX A

Hypertension and Diabetes Were the Most Common Conditions for Which Enrollees Received Remote Patient Monitoring

Condition Type	Number of Enrollees	Percentage of Enrollees Who Received Remote Patient Monitoring
Essential hypertension	313,328	55%
Diabetes with complication	53,227	9%
Diabetes without complication	39,474	7%
Sleep-wake disorders	30,971	5%
Disorders of lipid metabolism	23,681	4%
Heart failure	21,838	4%
Chronic kidney disease	20,190	4%
Chronic obstructive pulmonary diseases and bronchiectasis	14,902	3%
Hypertension with complications and secondary hypertension	13,203	2%
Coronary atherosclerosis and other heart disease	11,344	2%
Total	**484,848**	**85%**

Note: The number and percentage of enrollees do not sum to the overall total because enrollees may have used remote patient monitoring for more than one condition.

Source: OIG analysis of Medicare claims and Medicare Advantage encounter data, 2024.

APPENDIX B

Remote Patient Monitoring Was Most Commonly Provided by Primary Care Providers and Cardiologists

Type of Provider	Number of Providers	Percentage of All Providers
Primary Care	11,175	59%
Cardiology	2,132	11%
Nephrology	634	3%
Gastroenterology	574	3%
Pulmonology and Sleep Medicine	502	3%
Total	**15,017**	**79%**

Source: OIG analysis of CMS data, 2024.

APPENDIX C

Some Groups of Medicare Enrollees Receive Remote Patient Monitoring at Higher Rates Than Other Groups

Group	Rate Per 1,000 Enrollees Who Received Remote Patient Monitoring
All Medicare Enrollees	**8**
Race and Ethnicity*	
Black	15
Hispanic	11
Asian/Pacific Islander	11
White	7
Dual Status	
Dually Eligible	14
Medicare Only	7
Sex	
Female	9
Male	8
Age	
Over 84	11
75 to 84	10
Under 65	8
65 to 74	7
Location	
Urban	9
Rural	6
Program	
Traditional Medicare	9
Medicare Advantage	8

*Note: Information for enrollees identified as American Indian/Alaska Native, Other, Unknown, or had missing race and ethnicity data are not included in the table because of limitations with the data. Furthermore, although Hispanic is an ethnicity, Medicare's data combine race and ethnicity and limit enrollees to one category.

Source: OIG analysis of CMS data, 2024.

APPENDIX D

Agency Comments

Following this page are the official comments from CMS.

DATE: June 20, 2024

TO: Ann Maxwell
Deputy Inspector General for Evaluation and Inspections
Office of Inspector General

FROM: Chiquita Brooks-LaSure
Administrator
Centers for Medicare & Medicaid Services

SUBJECT: Office of Inspector General (OIG) Draft Report: Additional Oversight of Remote Patient Monitoring in Medicare is Needed (OEI-02-23-00260)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report.

CMS serves the public as a trusted partner and steward, dedicated to advancing health equity, expanding coverage, and improving health outcomes. As such, CMS has sought to recognize significant changes in health care practice, especially innovations in the active management and ongoing care of chronically ill patients. The use of remote patient monitoring lets health care providers manage acute and chronic conditions and may reduce patients' travel costs and infection risk. Beginning in 2018, Medicare began making separate payment for certain remote patient monitoring services. In recent years, CMS has established additional coding and payment for remote therapeutic and physiologic monitoring services, which describe remote monitoring services that involve the collection, analysis, and interpretation of digitally collected physiologic data, followed by the development of a treatment plan and the managing of a patient under the treatment plan.

CMS recognizes the importance of continuing to provide Medicare beneficiaries with access to medically necessary services and, at the same time, working to protect the Medicare Trust Funds from improper payments. CMS uses a robust program integrity strategy to reduce and prevent Medicare improper payments, including automated system edits within the claims processing system, and conducting prepayment and post-payment reviews. As part of this strategy, CMS recovers identified overpayments in accordance with agency policies and procedures.

The OIG's recommendations and CMS' responses are below.

OIG Recommendation
The OIG recommends that CMS implement additional safeguards to ensure that remote patient monitoring is used and billed appropriately in Medicare.

CMS Response
CMS concurs with this recommendation. As stated above, CMS uses a robust program integrity strategy to reduce and prevent Medicare improper payments. CMS will take the OIG's findings and recommendation into consideration when determining any appropriate next steps.

OIG Recommendation

The OIG recommends that CMS require that remote patient monitoring be ordered and that information about the ordering provider be included on claims and encounter data for remote patient monitoring.

CMS Response

This recommendation requires notice and comment rulemaking. CMS will take the OIG's findings and this recommendation into consideration when determining appropriate next steps.

OIG Recommendation

The OIG recommends that CMS develop methods to identify what health data are being monitored.

CMS Response

This recommendation may require notice and comment rulemaking. CMS will take the OIG's findings and this recommendation into consideration when determining appropriate next steps.

OIG Recommendation

The OIG recommends that CMS conduct provider education about billing of remote patient monitoring.

CMS Response

CMS concurs with this recommendation. CMS will continue to educate health care providers about billing of remote patient monitoring in accordance with existing payment policies.

OIG Recommendation

The OIG recommends that CMS identify and monitor companies that specialize in remote patient monitoring.

CMS Response

CMS concurs with this recommendation. As stated above, CMS uses a robust program integrity strategy. As part of this strategy, CMS has developed ways to assist with identifying health care providers billing for remote patient monitoring services. CMS will take the OIG's findings and recommendation into consideration when determining any appropriate next steps.

ACKNOWLEDGMENTS AND CONTACT

Acknowledgments

Miriam Anderson served as the team leader for this study. Others in the Office of Evaluation and Inspections who conducted the study include John Gordon and Alexis Mills. Office of Evaluation and Inspections headquarters staff who provided support include Christopher Galvin, Robert Gibbons, and Michael Novello.

This report was prepared under the direction of Jodi Nudelman, Regional Inspector General for Evaluation and Inspections in the New York regional office, and Nancy Harrison and Meridith Seife, Deputy Regional Inspectors General.

Contact

To obtain additional information concerning this report, contact the Office of Public Affairs at Public.Affairs@oig.hhs.gov. OIG reports and other information can be found on the OIG website at oig.hhs.gov.

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ENDNOTES

[1] The FDA definition of a medical device is consistent with the definition of a device in Section 201(h) of the Food, Drug, and Cosmetic Act. See 21 U.S.C. § 321.

[2] Enrollees are also required to have an established relationship with their provider to receive remote patient monitoring; this requirement was not in place during the COVID-19 Public Health Emergency.

[3] This review covers remote patient monitoring of physiologic data. It does not cover monitoring of non-physiologic data (i.e., remote therapeutic monitoring). Medicare covers these services differently. Examples of nonphysiologic data include information about medication adherence and cognitive behavioral therapy.

[4] Note that these numbers and others presented in this report are rounded. Because our calculations are based on unrounded numbers, they cannot always be recreated from the numbers presented in the report.

[5] Although this growth occurred during the COVID-19 pandemic, it does not appear to be entirely attributable to the pandemic. The use of remote patient monitoring has steadily increased each year since 2019. In contrast, the use of other telehealth services rose drastically at the beginning of the pandemic in the spring of 2020 and then began to decline. See *Telehealth Was Critical for Providing Services to Medicare Beneficiaries During the First Year of the COVID-19 Pandemic* (OEI-02-20-00520) Mar. 15, 2022.

[6] For traditional Medicare, these payments includes both Medicare payments to providers and enrollee cost-sharing. For Medicare Advantage, these payments include the amount Medicare Advantage plans reported paying to providers, which may not include enrollee cost-sharing.

[7] The increases in traditional Medicare payments are not attributable to changes in provider payment rates. During this time period, CMS slightly decreased the rates it paid providers for remote patient monitoring. Also, note that the Medicare Advantage payments reflect the amount Medicare Advantage Plans report having paid providers.

[8] A small number of enrollees received remote patient monitoring for both acute and chronic conditions.

[9] In 2020, about 62 percent of the approximately 63 million Medicare enrollees had hypertension. See CMS, Medicare Current Beneficiary Survey, 2020 Chartbook, Exhibit 2.4. Accessed at https://www.cms.gov/research-statistics-data-and-systems/research/mcbs/data-tables/2020-medicare-current-beneficiary-survey-annual-chartbook-and-slides on Oct. 3, 2023. See also CMS, Medicare Monthly Enrollment. Accessed at https://data.cms.gov/summary-statistics-on-beneficiary-enrollment/medicare-and-medicaid-reports/medicare-monthly-enrollment on Feb. 22, 2024.

[10] More than 80 percent of Black enrollees in Medicare have two or more chronic conditions, a higher proportion than enrollees in any other racial or ethnic group. See CMS, Medicare Current Beneficiary Survey, 2020 Chartbook, Table 2.17. Accessed at https://www.cms.gov/research-statistics-data-and-systems/research/mcbs/data-tables/2020-medicare-current-beneficiary-survey-annual-chartbook-and-slides on Oct. 3, 2023.

[11] Notably, among enrollees in traditional Medicare, about 74 percent of dually eligible enrollees had 2 or more chronic conditions in 2018. See CMS, Multiple Chronic Conditions, 2018. Accessed at https://data.cms.gov/medicare-chronic-conditions/multiple-chronic-conditions/data on Mar. 28, 2024.

[12] There are limited exceptions when an enrollee may not receive all three components. For example, if an enrollee uses their own device for monitoring or if an enrollee never collects and transmits health data.

[13] 85 Fed. Reg. 84472, 84543 (Dec. 28, 2020).

[14] To bill for providing education related to remote patient monitoring, Medicare requires that providers also receive the enrollee's health data on at least 16 days of every 30-day period. For monitoring related to confirmed or suspected COVID-19 during the Public Health Emergency, providers could bill for the education if enrollees collected and transmitted data for at least 2 days every 30 days.

[15] To bill for the device supply, Medicare requires that the provider receives the enrollee's health data on at least 16 of every 30 days. For monitoring related to confirmed or suspected COVID-19 during the Public Health Emergency, providers could bill for the device if enrollees collected and transmitted data for at least 2 days every 30 days.

[16] Providers may bill for education and setup once per episode of care and may bill for the device supply once every 30 days. They may bill treatment management and additional time for treatment management each month.

[17] Some of these enrollees may not have a claim for the education and setup of a device because they used a device they owned and, therefore, did not receive one from the provider. According to CMS, in these cases, the provider is not permitted to bill for education and setup.

[18] Education and setup can be billed only once per episode of care. To ensure that we identified all instances of education and setup, we reviewed claims from 2019 through 2022.

[19] OIG, Consumer Alert: Remote Patient Monitoring, November 21, 2023. Accessed at https://oig.hhs.gov/fraud/consumer-alerts/consumer-alert-remote-monitoring/ on Jan. 5, 2024.

[20] Companies that specialize in remote patient monitoring can enroll and bill as clinic or group practices. In this report, we identified companies that appear to specialize in remote patient monitoring based on an analysis of claims and encounters; although this is the best available method, this analysis may not identify all remote patient monitoring companies providing these services.

[21] Although CMS does not have an explicit requirement that remote patient monitoring services be ordered by a physician or other qualified health care professional, the 2021 Physician Fee Schedule Final Rule states that remote patient monitoring services can be ordered and billed *only by* physicians or nonphysician practitioners who are eligible to bill Medicare for Evaluation and Management services. 85 Fed. Reg. 84472, 84543 (Dec. 28, 2020).

[22] 42 CFR §424.507.

[23] In a prior report, OIG recommended that CMS require an ordering provider identification number be included on encounter records for durable medical equipment, laboratory services, imaging, and home health services. CMS has not yet implemented this recommendation. For more information, see *CMS's Encounter Data Lack Essential Information That Medicare Advantage Organizations Have the Ability To Collect* (OEI-03-19-00430) Aug. 24, 2020.

[24] See 85 Fed. Reg. 84472 (Dec. 28, 2020).

[25] See *Medicare Telehealth Services During the First Year of the Pandemic: Program Integrity Risks* (OEI-02-20-00720) Sept. 2, 2022. In addition, other previous OIG work found vulnerabilities related to "incident to" services, such as that these services were frequently delivered by practitioners who lacked the required licenses, certifications, credentials, or training. See *Prevalence and Qualifications of Nonphysicians Who Performed Medicare Physician Services* (OEI-09-06-00430) Aug. 3, 2009

[26] Prior to 2020, supervising providers were required to be in the same physical location as the staff they supervised.

[27] See *Medicare Telehealth Services During the First Year of the Pandemic: Program Integrity Risks* (OEI-02-20-00720) Sept. 2, 2022.

[28] CMS has a number of safeguards in place related to remote patient monitoring. For example, CMS and its contractors have implemented a number of payment edits to identify potentially inappropriate billing.

[29] See the HHS-OIG Work Plan, which can be found at https://oig.hhs.gov/reports-and-publications/workplan/index.asp.

[30] Use of ordering provider information has been a critical part of oversight efforts. For example, ordering provider information was utilized to uncover a fraud scheme related to kickbacks and the ordering of DMEPOS for Medicare enrollees. See OIG, Media Materials: Nationwide Brace Scam, April 2019. Accessed at https://oig.hhs.gov/newsroom/media-materials/nationwide-brace-scam/ on Jan. 4, 2024.

[31] Although enrollees are required to have an established relationship with the provider who bills for their remote patient monitoring, information about the ordering provider is also important as it provides transparency and accountability that are key to program integrity. For example, ordering provider information was used to uncover fraud schemes related to durable medical equipment. See OIG, Media Materials: Nationwide Brace Scam, April 2019. Accessed at https://oig.hhs.gov/newsroom/media-materials/nationwide-brace-scam/ on Jan. 4, 2024.

[32] For example, to bill Medicare for pacemakers, there are separate procedure codes that are used for different types of pacemaker devices. CMS could use a similar method for remote patient monitoring devices.

[33] This recommendation focuses on companies that bill for remote patient monitoring. These companies differ from companies that bill for telehealth services more broadly (e.g., telehealth companies). In a prior report, *Medicare Telehealth Services During the First Year of the Pandemic: Program Integrity Risks* (OEI-02-20-00720), OIG recommended that CMS identify telehealth companies that bill Medicare. That recommendation focuses on identifying companies that bill for a broad range of telehealth services, commonly services that can be provided in person.

[34] For Medicare fee-for-service, these amounts include Medicare payments, enrollee copays, and deductible amounts for these services. For Medicare Advantage, these amounts include the amount Medicare Advantage plans reported paying for these services, which may not include enrollee cost-sharing. In addition, due to incomplete Medicare Advantage encounter data, payment information may be missing in some instances.

[35] To determine the most common conditions, we grouped the primary diagnosis codes based on information from the Agency for Healthcare Research and Quality (AHRQ), *Clinical Classifications Software Refined*. To determine which diagnosis codes were for chronic and acute conditions, we used a dataset from the AHRQ, *Chronic Condition Indicator Refined for ICD-10-CM*. For more information, see AHRQ at https://hcup-us.ahrq.gov/toolssoftware/ccsr/ccs_refined.jsp and https://hcup-us.ahrq.gov/toolssoftware/chronic_icd10/chronic_icd10.jsp.

[36] We determined whether an enrollee lived in an urban or rural area by matching the enrollee's ZIP code from the Medicare Enrollment Database with a Census Bureau Core-Based Statistical Area (CBSA). We considered an enrollee to live in an urban area if they resided in a Metropolitan Statistical Area and in a rural area if they resided in a Micropolitan Statistical Area or outside a CBSA.

[37] Race and ethnicity information is based on data collected from the Social Security Administration and an algorithm developed by the Research Triangle Institute. This algorithm attempts to improve the quality of the Social Security Administration's data by amending the race data for certain groups on the basis of name and geography, as well as requests made by individuals for certain government materials to be provided in Spanish.

[38] To determine the proportion of enrollees who received education and setup, we reviewed claims and encounters from 2019 through 2022 because this component can be billed just once per episode of care. In addition, we considered CPT code 99091 to be treatment management since it includes time that providers communicate with patients about their data and related treatment decisions.