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## Ideal Postdischarge Follow-Up After Severe Pneumonia or Acute Respiratory Failure:

### A Qualitative Study of Primary Care Clinicians in Diverse Settings

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### Abstract

**BACKGROUND:** Most patients discharged after hospitalization for severe pneumonia or acute respiratory failure receive follow-up care from primary care clinicians, yet guidelines are sparse.

**RESEARCH QUESTION:** What do primary care clinicians consider to be ideal follow-up care after hospitalization for severe pneumonia or acute respiratory failure and what do they perceive to be barriers and facilitators to providing ideal follow-up?

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**STUDY DESIGN AND METHODS:** We conducted, via videoconferencing, semistructured interviews of 20 primary care clinicians working in diverse settings from five US states and Washington, DC. Participants described postdischarge visits, ongoing follow-up, and referrals for patients recovering from hospitalizations for pneumonia or respiratory failure bad enough to be hospitalized and to require significant oxygen support or seeking treatment at the ICU. Barriers and facilitators were probed using the capability, opportunity, motivation, behavior framework. Interview summaries and rigorous and accelerated data reduction analysis techniques were used.

**RESULTS:** Core elements of primary care follow-up after severe pneumonia or acute respiratory failure included safety assessment, medication management, medical specialty follow-up, integrating the hospitalization into the primary care relationship, assessing mental and physical well-being, rehabilitation follow-up, and social context of recovery. Clinicians described specific practices as well as barriers and facilitators at multiple levels to optimal care.

**INTERPRETATION:** Our findings suggest that at least seven core elements are common in follow-up care after severe pneumonia or acute respiratory failure, and conventional systems include barriers and facilitators to delivering what primary care clinicians consider to be optimal follow-up care. Future research could leverage identified barriers and facilitators to develop implementation tools that enhance the delivery of robust follow-up care for severe pneumonia or acute respiratory failure.

### Keywords

aftercare; continuity of patient care; health services research; pneumonia; primary health care

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Pneumonia was the fourth leading cause of hospitalization in the United States<sup>1</sup> even before the COVID-19 pandemic. Death, new disability, and readmissions are common after pneumonia.<sup>2,3</sup> For survivors of severe pneumonia or acute respiratory failure requiring hospitalization and significant oxygen support or ICU admission, specialty follow-up programs like post-ICU clinics, although appealing, are not widely available.<sup>4-6</sup> Detailed data on follow-up after hospitalization for pneumonia are sparse; 44% of 2018 Medicare beneficiaries hospitalized for pneumonia underwent a follow-up visit within 7 days,<sup>7</sup> and a Michigan study found that 53% of patients hospitalized for COVID-19 underwent follow-up within 14 days.<sup>8</sup> Frameworks for effective recovery after critical illness through primary care have been proposed,<sup>9</sup> echoing work on follow-up after discharge for critically ill and complex patients that suggests optimal follow-up is centered in primary care, even when subspecialty care also is needed.<sup>10-12</sup>

However, current guidelines on follow-up care after severe pneumonia or acute respiratory failure are sparse. General pneumonia guidelines lack recommendations for management after hospital discharge,<sup>13,14</sup> reflecting limited evidence. The 2021 Surviving Sepsis Campaign guidelines offer 19 recommendations for sepsis survivors—pneumonia is the most common cause of sepsis—but all were supported by low to no evidence.<sup>15</sup> A 2022 review of pneumonia management offered no mention of postdischarge or recovery care,<sup>16</sup> and the American Thoracic Society and Infectious Diseases Society of America guidance for primary care includes only a suggestion against follow-up chest radiography.<sup>14</sup> The 2023 American Thoracic Society guidelines for the management of acute respiratory distress

syndrome offer no follow-up guidance.<sup>17</sup> Primary care clinicians also report that discharge communication largely is inadequate to support ideal care after hospitalization for these patients.<sup>12,18-21</sup>

Even operating without structured guidelines to direct follow-up care, primary care clinicians are skilled in managing multiple acute and chronic conditions and finding creative ways to maintain and improve patient health.<sup>22,23</sup> A recent study found that general practitioners do not always know about post-intensive care syndrome, but nonetheless recognize and treat the issues that define it.<sup>12</sup> Identifying how primary care clinicians manage patients recovering from hospitalization for severe pneumonia or acute respiratory failure may provide insight into effective elements of ideal follow-up care for this broad population, expanding beyond existing literature on ARDS and critical illness recovery.<sup>24-27</sup> We used qualitative methods to examine how primary care clinicians working in multiple states and diverse settings described organizing initial follow-up for these patients, the activities that constituted quality follow-up, the factors influencing their ability to perform quality follow-up, and the benefits of primary care involvement in follow-up for these patients.

## Study Design and Methods

Using semistructured phone interviews with primary care clinicians, we examined (1) follow-up care for patients recovering from a hospitalization for severe pneumonia or acute respiratory failure and (2) barriers and facilitators to what these clinicians considered ideal follow-up care for them. Our study was deemed exempt by the Johns Hopkins University School of Medicine Institutional Review Board (Identifier: IRB00346407). Funds from Johns Hopkins University paid for the participation incentive.

Our study design was grounded in a sequential adaptive approach from qualitative sociology.<sup>28</sup> A sequential adaptive approach seeks inferential saturation by approaching each interview as a case providing analytic insight or new questions that guide subsequent sample selection and inquiry. In our study, this iterative approach provided for both literal and theoretical replication and refinement: additional similar cases (ie, respondents within the same system) and differing cases (ie, respondents in different care settings) were sought to clarify and refine conceptual and thematic patterns as they developed. Inferential saturation occurred when interviews no longer provided new insights.

We used purposive sampling to recruit a variety of primary care clinicians (physicians, nurse practitioners, physician assistants) working in a variety of settings (academic-affiliated clinics, federally qualified health centers, and so on). We recruited via the research team's existing contacts in primary care, social media posts, and soliciting respondents for other potential participants. Recruitment slowed during the winter; after completing 12 interviews, we added a \$25 gift card incentive to increase recruitment. We also drew on the criteria of Malterud et al<sup>29</sup> for information power to assess sampling sufficiency (e-Appendix 1).

One of the authors (K. E. H.), a medical sociologist and expert in qualitative research, conducted interviews via videoconferencing, asking participants to describe

initial postdischarge visits and practices for ongoing follow-up and referrals for “patients recovering from hospitalizations for pneumonia or respiratory failure bad enough to be hospitalized and require a lot of oxygen support or need to go to the ICU.” We used this definition because patients requiring high-volume oxygen support, but not mechanical ventilation, may or may not be admitted to the ICU because of variation in ICU admission practices in the United States; previous work suggests that < 10% of hospitalized patients with pneumonia receiving invasive mechanical ventilation.<sup>30</sup> We leveraged the capability, opportunity, motivation, behavior framework<sup>31</sup> to develop interview questions and our sequential adaptive approach to refine and extract maximal interview quality continually. The recruitment script, consent script, and interview guide are in e-Appendix 1. Interviews were audio-recorded and transcribed.

We used interview summaries and rigorous and accelerated data reduction techniques,<sup>32</sup> which two of the authors (K. E. H. and T. J. I.) used previously.<sup>18,33</sup> Interview summaries by K. E. H. were shared for insights and feedback with the rest of the team. We began with an all-inclusive data table (in Microsoft Excel) organized by respondent and interview question. Data then were reduced through the production of subsequent tables with increasingly concise representations of the data. Our all-inclusive data table was added to continually, and after five interviews, K. E. H. constructed tables that captured practices, barriers, and facilitators as described by each respondent. Further reduced tables were constructed where practices were organized around key areas that emerged through discussion of the previous table. A similar process was used to conceptualize barriers and facilitators. Tables also were created around emergent themes. Two team members (K. E. H. and T. J. I.) met regularly to discuss and resolve discrepancies in data reduction and conceptualization, and reduced tables were discussed via e-mail repeatedly by the entire team, which led to further conceptualization of differences and commonalities within concepts and themes. Rigorous and accelerated data reduction techniques complemented our sequential adaptive approach; core practice concepts identified in interviews 1 through 13 were added as probes in subsequent interviews to confirm saturation.

## Results

Between September 2022 and July 2023, we completed 20 interviews (range, 25-81 min; median, 41 min) with clinicians working in academic and other health system-based practices, federally qualified health centers, and private practice in the District of Columbia, Maryland, Michigan, North Carolina, New York, Oregon, and Ohio with a median of 9 years in practice. (Table 1).

### Organizing Follow-Up

Few clinicians had an explicitly protocolized approach for follow-up of patients after severe pneumonia or acute respiratory failure hospitalization, yet most described a set of habitual practices for follow-up care. About one-half mentioned that a standard order set or care pathway for follow-up could be helpful, providing guided standardization with opportunities for individualization where needed.

“She was a patient that—as I was looking at her—I thought, ‘Gosh! It would be really nice if we had some sort of post-pneumonia order set or pathway.’ And, to my knowledge, we don’t have one ... it would be nice to have more structure around [that]. ‘This is something we’re going to give to a patient who had a recent hospitalization with pneumonia. These are going to be automatic checkpoints, etc.’”

(participant 103)

Many clinicians described prioritizing practices and scheduling additional follow-up visits given the constraints of follow-up visit length after hospitalization; although some reported up to 40 min if patients also were newly assigned to them, most reported 15 to 20 min.

“We [primary care] can see them back frequently. After hospitalization we can bring them back in the office weekly if we need to, even sooner, to be able to assess how they’re doing.”

(participant 116)

Interviews highlighted the importance of the discharge summary to help identify the highest priority elements of follow-up after hospitalization, reinforcing findings in other studies.<sup>12,18,20</sup>

### The Work of Follow-Up

Interviewees described priority initial follow-up practices for severe pneumonia or acute respiratory failure in seven areas: safety assessment, medication management, medical specialty follow-up, integrating the hospitalization into the primary care relationship, assessing mental and physical well-being, rehabilitation follow-up, and social context of recovery. Participants described follow-up practices that were highly relevant for patients with severe pneumonia or acute respiratory failure after hospitalization that were distinct from those performed as part of general follow-up practices after hospitalization (Table 2).

**Safety Assessments:** Primary care clinicians ensured their own assessment of appropriate breathing or respiratory status, even if visits were conducted by phone or video.

“We will have them walk with the pulse oximeter and see if they’re de-satting [decreasing or lowering oxygen saturation level in the blood], and that is something that is not a protocol. It’s something that I think it would be great if we could ... make sure that’s part of their checkin.”

(participant 120)

“Our preference was always that they come in. Just because it’s hard with respiratory failure to really do the whole assessment over the video, but at least we could see whether they’re having breathing difficulty, or many of them already had, you know [pulse oximeters], so they could do an oxygen check as they’re moving around.”

(participant 111)

**Medication Management:** Chronic medications needed temporary or permanent adjustment after severe pneumonia or acute respiratory failure, and adherence with medications after discharge was assessed.

“It’s no surprise that older adults have hypertension, heart failure, or multiple meds that maybe their cardiologist has spent years perfecting and then ... if they’re really ill and they become hypotensive, bradycardic, [the hospital physicians] start getting rid of those medications, and they’re not always added back.”

(participant 113)

“Patients get admitted to the hospital and they get sent home on the hospital formulation of an inhaler. And they’re also taking the one they had at home. ... I’m looking for duplications.”

(participant 118)

**Medical Specialty Follow-Up:** Referrals for specialty services needed to be made, laboratory tests and imaging needed to be ordered and scheduled, and incidental findings and other nonacute problems identified during patient hospitalization or by primary care are addressed.

“The recommendations to the patient are, ‘Follow up with all of these specialties,’ and appointments are not made. ... Sometimes I just get on the phone. ‘Let’s just call there now and get an appointment. ... Let’s get this coordinated while we have you here in the room. This is important.’”

(participant 107)

“I’d say one out of four probably has something incidental whether that be a random pulmonary nodule or an adrenal nodule that was picked up from CT imaging.”

(participant 114)

**Integrating the Hospitalization Into the Primary Care Relationship:** Despite the centrality of the longitudinal relationship, primary care clinicians reported they usually had not been a part of the acute hospitalization; some expressed frustration. They needed to understand the hospitalization’s implications for the ongoing longitudinal arc of care, to provide anticipatory guidance on what recovery might look like, and to resolve patients’ questions about the hospitalization.

“They want to know why they don’t feel better yet. ... [It’s] helping them set realistic expectations. ‘For every day you’re on your back, it’s going to take three to recover. Your lungs are struggling, damaged.’ Patients want to feel better faster.”

(participant 103)

**Assessing Mental and Physical Well-Being:** Clinicians varied in their assessments of functional status, from basic mobility to swallowing and emotional well-being. Clinicians tried to link patients to available resources, acknowledging they sometimes felt ill-equipped.

“Everyone who’s ... lying in bed all day should probably be getting some sort of physical therapy or rehab.”

(participant 110)

“Our patients receive a [Patient Health Questionnaire 2] screening [for depression and anxiety] when they come into our office ... and [posttraumatic stress disorder]—after being hospitalized—that can be present there as well.”

(participant 116)

**Rehabilitation Follow-Up:** Primary care clinicians explained and practiced breathing exercises with a patient, scheduled referrals for physical therapy, or referred patients to pulmonary rehabilitation services.

“What activities are they being able to do? Just gauging their recovery. Sometimes patients are sent home with an incentive spirometer. I’ll ask, ‘Are you doing that?’ Or certain inhalers. ... It’s ingrained in me to always check on dosing and technique.”

(participant 102)

**Social Context of Recovery:** Clinicians discussed lifestyle and social needs, addressing preventing infections, improving lung health, and considering caregiver needs. Clinicians who had access to social workers, mental health clinicians, and even system-provided transportation services described addressing many social issues “as they came up.” However, without support or because of insurance limitations, most primary care clinicians noted that these issues could and did impede recovery.

“Key to lung injury and your risks down the road is, I think, making sure they have all their vaccines.”

(participant 101)

“I have like a patient right now ... and the only place that took her insurance with pulmonary rehab was half an hour away. She couldn’t get there. So, could she benefit from it? Probably. It’s just not gonna happen. ... Most of our patients who are low income ... they can get a [city] access card to get discounted [city transit] service. ... There are resources, but they’re imperfect resources.”

(participant 106)

“If there are any equipment needs or housing instability—just depending on the patient’s situation, I can reach out to my social worker to help connect that patient to resources.”

(participant 102)

### Barriers and Facilitators

Primary care clinicians reported that multiple determinants across multiple levels affected the delivery of follow-up care for severe pneumonia or acute respiratory failure (Fig 1). Two

common concerns warrant highlighting: (1) quality and appropriateness of rehabilitation services and (2) improved processes at hospital discharge.

### **Quality and Appropriateness of Rehabilitation Services**

Although primary care clinicians believed that access to rehabilitation services was helpful, some believed that they lacked knowledge as to whether and for whom specific services, such as pulmonary rehabilitation, were most appropriate. One commented on the variability of quality among home-based physical therapy. Another said, particularly for “long COVID” care, “You offer [pulmonary rehabilitation] because it’s what you have.”

“Some patients really take advantage of [these services] and do great and other patients try them and are like, ‘Yeah, I didn’t get any benefit from that at all.’ And it’s really hard to know whether—was it the quality of this particular service, or was it something about the patient and what they brought to the encounter?”

(participant 104)

### **Improved Processes at Hospital Discharge**

Clinicians mentioned ways in which discharge processes could facilitate better care after discharge, including prescheduling of follow-up visits (radiography, specialty care, and so on), pharmacist-conducted medication reconciliation, ensuring that patients have needed medical supplies, and patient-facing education about recovery expectations.

“It’s really nice—the [doctors of pharmacy] being able to review all their medications and interactions and talk to the patient. ... It’s really nice to have that input from the pharmacist.”

(participant 107)

“Making sure they actually are going to get that portable oxygen concentrator that they prescribed, or the rollator [walker], or the incontinence pad or gel pads. ... It’s well-intentioned ... but then the patient gets home and doesn’t have that ... it’s really overwhelming when they come for the visit and nothing is in place.”

(participant 119)

### **Benefits of Primary Care-Led Recovery**

Primary care clinicians often described their beneficial role as the “global” person who was following and coordinating care for patients, ensuring patients could balance and maintain all medications and treatments prescribed by specialty and rehabilitation services.

“We also do more care coordination pieces as well ... ‘Here’s my impression of your medicines now, but let’s clear it with everyone else who’s involved, so that everyone agrees that this is the best plan for you.’ ... I think there is value to having a generalist involved who’s going to probe about all of these things and help facilitate care and close gaps that may exist for a person with various other kinds of psychosocial barriers to care.”

(participant 108)



Primary care clinicians believed that they were able to identify changes in patient health and functional status with more nuance than specialists or transition-of-care services because they were most familiar with a patient's baseline status. Similarly, they believed that they could identify context-related needs because they were familiar with patients' housing and support environments.

"That wide-open aperture and the longitudinal relationship, and really just knowing my piece. ... There are some patients where I will say, 'I've tried this before. We've tried this multiple times. Evening meds do not work for this patient.'"

(participant 112)

"I'm taking care of their family members, too—you get the other family in there—and I think we do a good job of including them, to try to discuss how [the patient's] care is going to look over the next few weeks."

(participant 117)

These benefits did not mean that primary care clinicians were opposed to specialized follow-up and recovery services, but rather, they believed that it was important to keep primary care clinicians at least in the loop and ideally at the helm after hospitalization. When asked whether others should be responsible for this work, respondents emphasized they wanted and felt qualified to coordinate and provide follow-up care, but desired greater resources and support within primary care to accomplish this work.

"I'm arrogant; I would say no. I think good internists do everything really well, those of us operating at the peak of our license."

(participant 101)

"I do think there are examples [of things that could be done by someone else], but I also don't feel like that needs to change, because I think that is the relationship that the PCP [primary care provider] has with the patient. ... I think beefing up the resources for PCPs would be wonderful, to be able to handle all of these needs."

(participant 116)

Scheduling specialty visits deemed necessary before discharge was an exception, although some noted that this was managed feasibly with sufficient support staff in their offices.

## Discussion

In a diverse sample of primary care clinicians, follow-up after hospitalization for severe pneumonia or acute respiratory failure included a variety of practices that could be grouped into seven areas: safety assessment, medication management, medical specialty follow-up, integrating the hospitalization into the primary care relationship, assessing mental and physical well-being, rehabilitation follow-up, and social context of recovery. Serving as expert informants, primary care clinicians described practices specific to severe pneumonia or acute respiratory failure follow-up and outlined barriers and facilitators to delivering such care, which may present opportunities to improve follow-up experiences for primary care clinicians and patients. Clinicians also highlighted primary care's important role in recovery

from respiratory illness, including balancing new and ongoing issues and treatments and drawing on their longitudinal and patient-specific knowledge to inform care decisions.

Despite the high incidence and long-term impact of severe pneumonia or acute respiratory failure, to our knowledge, no formal recommendations exist to guide follow-up care, which some noted in our interviews. Limited understanding of best practices for follow-up care is a major knowledge gap impairing patient recovery.<sup>34</sup> Primary care clinicians are well positioned to deliver follow-up care to promote recovery and to prevent complications such as unnecessary hospital readmissions, later mortality, and new or persistent health deficits.<sup>35</sup> Our results provide evidence identifying seven core elements of follow-up care for survivors of severe pneumonia or acute respiratory failure. The core elements complement the Transitions of Care Consensus Policy Statement,<sup>35</sup> endorsed by six professional societies, which emphasizes the information transfer needed by receiving outpatient clinicians to accomplish these elements of care. Core elements also specifically address patient-reported problems after pneumonia,<sup>36-38</sup> the three domains of post-intensive care syndrome (cognitive, physical, and mental health),<sup>39</sup> as well as other issues commonly considered important for recovery from critical illness and sepsis.<sup>27,40-42</sup> Within these elements, we found specific practices highly relevant for severe pneumonia or acute respiratory failure as well as general needs after hospitalization.

Organizations can use these data to identify opportunities for quality improvement. Similar core elements for follow-up after sepsis<sup>41,43</sup> were associated with improved outcomes in observational data,<sup>44</sup> and structured implementation of the sepsis care practices improved rehospitalization and mortality in a randomized controlled trial.<sup>45</sup> We also identified potential opportunities and targets for system-driven changes to reduce burdens facing primary care clinicians.<sup>46,47</sup>

This study has several strengths. First, primary care clinicians are expert informants, and our study leveraged their experiences to identify a core set of follow-up practices for patients after hospitalization for severe pneumonia or acute respiratory failure, including some not subsumed in general care after hospitalization, and possible tools for improving recovery.<sup>34</sup> We sampled diverse primary care clinicians in varied practice settings, capturing broad and generalizable perspectives. Finally, we supplemented rich descriptions of follow-up practices with explicit theory-grounded assessments of facilitators and barriers.

This study also has important limitations. First, although we sought variation by practice type, provider experience, and clinical background, our small sample size may have limited the perspectives we included. Second, although our results provide expert opinion on optimal follow-up practices up after severe pneumonia or acute respiratory failure, we were not able to assess the objective effectiveness of these practices. Third, our respondents acknowledged heterogeneity among patients in this population, and specific practices within each follow-up area did not apply to all patients recovering from severe pneumonia or acute respiratory failure. Fourth, we did not probe explicitly for differences between patients who had and had not been in an ICU. Finally, our qualitative design does not provide information on the extent to which these practices currently are implemented for patients recovering from hospitalization for severe pneumonia or acute respiratory failure. Identifying whether

and where deficiencies exist, as well as patient and caregiver perspectives, are needed before designing interventions.

## Interpretation

Serving as expert informants, primary care clinicians outlined practices constituting optimal follow-up after hospitalization for severe pneumonia or acute respiratory failure and described barriers and facilitators to such care. Our findings complement other work on primary care follow-up of critically ill and hospitalized patients<sup>12,48-50</sup> to suggest directions for further research that will inform best practices for one of the most common reasons older adults receive primary care follow-up.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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### Take-home Points

**Research Question:**

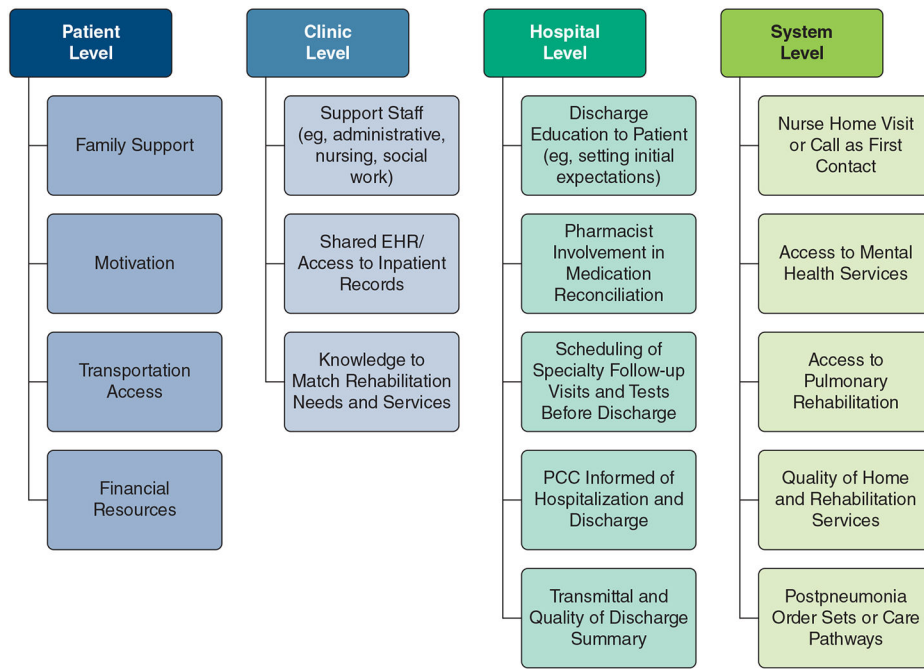
What do primary care clinicians consider to be ideal follow-up care after hospitalization for severe pneumonia or acute respiratory failure, and what are the perceived barriers and facilitators to providing ideal follow-up?

**Results:**

Primary care clinicians identified multiple core elements of follow-up for severe pneumonia or acute respiratory failure, including safety assessment, medication management, medical specialty follow-up, integrating the hospitalization into the primary care relationship, assessing mental and physical well-being, rehabilitation follow-up, and social context of recovery. They also identified structural determinants that impact delivery of this care.

**Interpretation:**

Our findings suggest that at least seven core elements are common in primary care follow-up after severe pneumonia or acute respiratory failure, and identified barriers and facilitators highlight opportunities to improve follow-up care for this population.



**Figure 1 –.**  
 Diagram showing the determinants of ideal follow-up for severe pneumonia or acute respiratory failure. EHR = electronic health record; PCC = primary care clinician.

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**TABLE 1 ]**

**Primary Care Clinician Sample Demographics**

<b>Demographics</b>	<b>No.</b>
Gender	
Man	5
Woman	15
Race	
White	16
Middle Eastern, Asian	4
Location	
Washington, DC or Maryland	3
Michigan	4
North Carolina	8
New York	3
Oregon	1
Ohio	1
Certifications or licensures <sup>a</sup>	
Internal medicine	13
Family medicine	3
Certified physician’s assistant	2
Registered nurse practitioner	2
Years in primary practice (not including training)	
1-5	5
6-10	6
11-20	3
> 20	6
Clinicians at current practice (not including trainees), No.	
4-8	7
9-14	7
15-25	6
Advanced practice providers in current practice, %	
< 15%	8
15-30%	10
> 30%	2
Resident clinic at current practice	
Yes	13
No	7
Patient population that is low income, %	
< 50%	10
50%	10

<sup>a</sup>Three physicians held certifications in pediatrics as well.

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**TABLE 2 ]**

**Follow-Up Visit Practices Severe Pneumonia or Acute Respiratory Failure**

<b>Area of Focus</b>	<b>Specific to Severe Pneumonia or Acute Respiratory Failure</b>	<b>Relevant Follow-Up Practices After Hospitalization</b>
Safety assessment	<ul style="list-style-type: none"> <li>Assess respiratory status</li> </ul>	<ul style="list-style-type: none"> <li>Assess symptoms</li> <li>Assess vital signs</li> </ul>
Medication management	<ul style="list-style-type: none"> <li>Supplemental oxygen needs</li> </ul>	<ul style="list-style-type: none"> <li>Assess medication compliance</li> <li>Medication reconciliation</li> </ul>
Medical specialty follow-up	<ul style="list-style-type: none"> <li>Incidental lung findings</li> <li>Post-COVID or post-ICU clinic referrals</li> </ul>	<ul style="list-style-type: none"> <li>Set up specialty follow-up</li> <li>Imaging and laboratory follow-up</li> </ul>
Integrating the hospitalization into the primary care relationship	<ul style="list-style-type: none"> <li>Provide additional details about ICU stay, periods of mechanical ventilation</li> </ul>	<ul style="list-style-type: none"> <li>Review discharge summary and notes, hospitalization</li> <li>Anticipatory guidance about recovery</li> <li>Assess needs for additional follow-up</li> </ul>
Assess mental and physical well-being	<ul style="list-style-type: none"> <li>Assess swallowing if patient was intubated</li> </ul>	<ul style="list-style-type: none"> <li>Assess nutritional status</li> <li>Assess psychological status and motivation</li> <li>Assess mobility</li> <li>Assess cognitive status</li> </ul>
Rehabilitation follow-up	<ul style="list-style-type: none"> <li>Explain or advocate for breathing exercises; use of incentive spirometer</li> <li>Set up pulmonary rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Set up or continue physical or occupational therapy</li> </ul>
Social context of recovery	<ul style="list-style-type: none"> <li>Discuss infection protection, vaccines for pneumonia and COVID-19</li> <li>Discuss smoking cessation</li> <li>Environmental respiratory risks</li> </ul>	<ul style="list-style-type: none"> <li>Assess social determinants of health (housing, transportation, and so on)</li> <li>Assess social support</li> <li>Assess caregiver well-being</li> <li>Paperwork assistance (disability, work modifications, and so on)</li> </ul>