**IMPLEMENTATION OUTCOMES QUESTIONNAIRE**

**Overview for Survey Administrator**

The Implementation Outcomes Questionnaire (IOQ) is designed to assess both progress and success with implementation of a pharmacy service or intervention. Implementation outcomes are key antecedents to achieving the traditional clinical and economic outcomes typically associated with an intervention or service.

This questionnaire is comprised of multiple implementation outcomes measures. The measure or measures you select depend on which implementation concept you are interested in assessing, and your implementation stage (see **Table 1** below). Please note that some of the items may need to be adapted based on your intervention or service of interest.

Below is a brief summary to guide your selection of measures:

1. **If you are considering implementing a new service**: Adoption, Acceptability, Feasibility, and Appropriateness.
2. **If you are in the midst of implementing a service**: Acceptability, Feasibility, Appropriateness, and Penetration.
3. **If you are improving a service**: Acceptability, Feasibility, Appropriateness, and Penetration.
4. **If you are considering sustaining a service**: Acceptability, Penetration, and Sustainability.

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| **Table 1. Implementation Outcomes Selection Overview1** | | | |
| **Implementation Outcome** | **Definition** | **Implementation Stage** | **Purpose** |
| Adoption | The intention, initial decision, or action to try or use the service (uptake, utilization, initial implementation, intent to try) | Early- | To determine intent to adopt a service |
| Acceptability | Perceptions that the service is agreeable, palatable, or satisfactory | Early- | To determine service acceptability prior to adoption |
| Mid- | To monitor or confirm acceptability as the service is being implemented or improved |
| Late- | To inform decision to continue and maintain the service |
| Feasibility | Extent to which a service can be successfully used or carried out within a given practice site (suitability or practicability) | Early- | To determine the extent to which the service can be carried out within a practice site prior to adoption |
| Mid- | To monitor or confirm service feasibility as it is being implemented or improved |
| Appropriateness | Perceived fit, relevance, or compatibility of the service for a given practice site, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem | Early- | To determine the perceived fit or compatibility of the service with the practice site, provider, etc. prior to adoption |
| Mid- | To monitor or confirm service appropriateness as it is being implemented or improved |
| Penetration | Integration of a service within a practice site and its subsystems (spread) | Mid- | To determine whether the service is being appropriately integrated into a practice site |
| Late- | To inform decision to continue and maintain the service |
| Sustainability | The extent to which a newly implemented service is maintained or institutionalized with a practice site’s ongoing, stable operations | Late- | To determine readiness for sustainability, and monitor sustainability efforts |

**1**Fidelity (i.e., the degree to which the service is implemented as intended) is reported elsewhere.15 Cost (i.e., the financial impact of an implementation effort) is not included.

The length of survey completion for the full questionnaire is 20-30 minutes; however, the amount of time required for each measure when completed separately ranges from 3 to 10 minutes. If your participants work for multiple sites in which the service is being deployed, either choose one site to focus on or have participants fill out separate surveys for each site.

**Instructions for Survey Respondents**

The Implementation Outcomes Questionnaire (IOQ) is designed to assess both progress and success with implementation of a pharmacy service or intervention. Implementation outcomes are key antecedents to achieving the traditional clinical and economic outcomes typically associated with an intervention or service.

This survey should take approximately [XX] minutes. If you are implementing the service at multiple sites, you should complete one questionnaire per site.

Please keep in mind the following **important terms** as you complete the questionnaire.

**Important Terms**

**Service** refers to the service or intervention that you are implementing.

**Staff** refers to any support staff involved in delivery or support of the service.

**Site** refers to the physical location at which implementation is taking place.

**Organization** refers to the larger organization (e.g., health system) that the site is a part of.

**ADOPTION**

For items in this section, please respond with how much you agree or disagree with each statement from “Strongly Disagree” to “Strongly Agree.”

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| --- | --- | --- | --- | --- | --- | --- |
| Items | Strongly Disagree  (1) | Disagree  (2) | Slightly Disagree  (3) | Slightly Agree  (4) | Agree  (5) | Strongly Agree  (6) |
| 1. I have spoken with other pharmacists about their experiences with this service [NAME]. |  |  |  |  |  |  |
| 1. I have recently attended trainings, workshops, supervision sessions, or other learning sessions focused on this service. |  |  |  |  |  |  |
| 1. I plan to use this service. |  |  |  |  |  |  |
| 1. I have enough information to begin implementation of this service. |  |  |  |  |  |  |
| 1. I intend to use this service with all of my eligible patients. |  |  |  |  |  |  |

**ACCEPTABILITY**

For items in this section, please respond with how much you agree or disagree with each statement from “Strongly Disagree” to “Strongly Agree”.

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| --- | --- | --- | --- | --- | --- | --- |
| Items | Strongly Disagree  (1) | Disagree  (2) | Slightly Disagree  (3) | Slightly Agree  (4) | Agree  (5) | Strongly Agree  (6) |
| 1. This service [NAME] is a good way to optimize patients’ medications. |  |  |  |  |  |  |
| 1. I am in favor of delivering this service. |  |  |  |  |  |  |
| 1. This service easily fits with the way I practice. |  |  |  |  |  |  |
| 1. I am not interested in implementing this service. |  |  |  |  |  |  |
| 1. I have a positive attitude about implementing this service. |  |  |  |  |  |  |
| 1. This service is a good choice for optimizing a patient’s medication use. |  |  |  |  |  |  |
| 1. I am committed to carrying out this service. |  |  |  |  |  |  |

**FEASIBILITY**

For items in this section, please respond with how much you agree or disagree with each statement from “Strongly Disagree” to “Strongly Agree.”.

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| Items | Strongly Disagree  (1) | Disagree  (2) | Slightly Disagree  (3) | Slightly Agree  (4) | Agree  (5) | Strongly Agree  (6) |
| AT THIS SITE: | | | | | | |
| 1. The amount of time required to implement this service [NAME] is manageable. |  |  |  |  |  |  |
| 1. The service–related guidance documents needed to understand and carry out the service are feasible to use. |  |  |  |  |  |  |
| 1. The financial resources needed to carry out this service are reasonable. |  |  |  |  |  |  |
| 1. The staff needed to carry out this service is reasonable. |  |  |  |  |  |  |
| 1. The space needed to carry out this service is reasonable. |  |  |  |  |  |  |
| 1. The pharmacist(s) responsible is able to dedicate the appropriate time to deliver this service. |  |  |  |  |  |  |
| 1. The amount of time required for documentation of this service is reasonable. |  |  |  |  |  |  |
| 1. Preparation for carrying out this service is reasonable. |  |  |  |  |  |  |

**APPROPRIATENESS**

For items in this section, please respond with how true you believe each statement to be from “Not at all” to “Extremely”.

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| Items | Not at all  (1) | A little  (2) | Moderately  (3) | Very  (4) | Extremely  (5) |
| 1. How compatible is this service [NAME] with your site’s mission? |  |  |  |  |  |
| 1. How relevant is this service to your patient population? |  |  |  |  |  |
| 1. How well does this service fit with your skill set? |  |  |  |  |  |
| 1. How compatible is this service with your site’s workflow? |  |  |  |  |  |
| 1. How well does this service fit with your current approach to patient care? |  |  |  |  |  |
| 1. How well does this service fit with the site’s overall approach to patient care? |  |  |  |  |  |

**PENETRATION**

For items in this section, please respond by providing your best estimate of number of patients or number of pharmacists as indicated.

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| Items | Response (Numbers) |
| Patient Estimates |  |
| 1. Over the past 6 months, what is the estimated number of patients who received this service [NAME] at your site? |  |
| 1. Over the past 6 months, what is the estimated TOTAL number of patients who were eligible to receive this service [NAME] at your site? |  |
| Provider Estimates |  |
| 1. Over the past 6 months, what is the estimated number of pharmacists who have delivered this service [NAME] at your site? |  |
| 1. Over the past 6 months, what is the estimated TOTAL number of pharmacists who could have delivered this service [NAME] at your site? |  |

**SUSTAINABILITY**

For items in this section, please reflect on the questions in each item to formulate your response, and check ONLY one of the multiple choice responses.

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| **Item Questions** | **Check (✓)** | **Item Responses** | **Values** |
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| 1. **BENEFITS OF THIS SERVICE BEYOND HELPING PATIENTS**  * In addition to helping patients, are there other benefits? * Does this service improve efficiencies around medication management? * Does this service capitalize on members of the healthcare team’s expertise? |  | This service [NAME] improves efficiencies around medication management and optimizes the pharmacist’s role within the healthcare team. | 3 |
|  | This service improves efficiencies around medication management but does not optimize the pharmacist’s role within the healthcare team. | 2 |
|  | This service does not improve efficiencies around medication management, but optimizes the pharmacist’s role within the healthcare team. | 2 |
|  | This service neither improves efficiencies around medication management nor optimizes the pharmacist’s role within the healthcare team. | 1 |

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| 1. **CREDIBILITY OF THE BENEFITS OF THIS SERVICE**  * Are benefits of this service visible to patients, staff, and the site? * Do pharmacists and staff believe in the benefits of this service? * Can all pharmacists and staff describe the benefits clearly? * Is there evidence that this service has been successful elsewhere? |  | Benefits of this service [NAME] are immediately obvious, supported by evidence, and believed by stakeholders. | 3 |
|  | Benefits of this service are not immediately obvious, even though they are supported by evidence and believed by stakeholders. | 2 |
|  | Benefits of this service are not immediately obvious, even though they are supported by evidence. They are not believed by stakeholders. | 2 |
|  | Benefits of this service are not immediately obvious and not supported by evidence. They are not believed by stakeholders. | 1 |

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| 1. **ADAPTABILITY OF THIS SERVICE**  * Can this service overcome internal pressures and continually improve? * Does this service continue to meet ongoing needs effectively? * Does this service rely on an individual or group of people, technology, finance, etc. to keep it going? * Can it keep going when these are removed? |  | This service [NAME] can be adapted in response to other organizational changes (without negatively impacting patient outcomes), and there is a system for continually improving this service. | 3 |
|  | This service can be adapted in response to other organizational changes (without negatively impacting patient outcomes), but there is no system for continually improving this service. | 2 |
|  | This service is not able to be adapted in response to other organizational changes (without negatively impacting patient outcomes), but there is a system for continually improving this service. | 2 |
|  | This service is not able to be adapted in response to other organizational changes (without negatively impacting patient outcomes), and there is no system for continually improving this service. | 1 |

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| 1. **EFFECTIVENESS OF THIS SERVICE TO OPTIMIZE MEDICATIONS**  * Does this service consistently produce the intended patient outcomes? * Are data already collected and are they easily accessible? * Is there a process that monitors the benefits of this service and facilitates changes to the service to optimize patient outcomes? * Are the results of the change communicated to others within the site and organization? |  | There is a process in place to monitor patient outcomes relevant to this service [NAME], act on them, and communicate results. | 3 |
|  | There is a process in place to monitor patient outcomes relevant to this service, act on them, but results are not communicated. | 2 |
|  | There is a process in place to monitor patient outcomes relevant to this service. The results are communicated but no one acts on them. | 2 |
|  | There is no process in place to monitor patient outcomes relevant to this service, nor act or communicate them. | 1 |

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| 1. **PHARMACISTS AND STAFF INVOLVEMENT AND TRAINING TO SUSTAIN THIS SERVICE**  * Did the pharmacists and staff play a part in either selecting or implementing this service? * Were the pharmacists and staff consulted prior to implementation of this service? * Is there a training infrastructure to identify gaps in skills and knowledge, and are pharmacists and staff educated and trained to implement and sustain this service? |  | Pharmacists and staff have been involved from the beginning and are prepared to sustain the service [NAME]. | 3 |
|  | Pharmacists and staff have been involved from the beginning but are not prepared to sustain the service. | 2 |
|  | Pharmacists and staff have not been involved from the beginning but they have been prepared to sustain the service. | 2 |
|  | Pharmacists and staff have neither been involved from the beginning nor prepared to sustain the service. | 1 |

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| 1. **PHARMACISTS AND STAFF ATTITUDES TOWARD SUSTAINING THIS SERVICE**  * Are pharmacists and staff encouraged to express their ideas and is their input taken into account? * Are pharmacists and staff able to run small-scale tests (e.g., PDSAs, improvement cycles) based on their ideas, to facilitate implementation and improvements? * Do pharmacists and staff think that this service produces sufficient benefits to be continued into the future? |  | Pharmacists and staff feel ownership over this service [NAME] and believe this service will be sustained. | 3 |
|  | Pharmacists and staff feel ownership over this service, but do not believe this service will be sustained. | 2 |
|  | Pharmacists and staff do not feel ownership over this service, but believe this service will be sustained. | 2 |
|  | Pharmacists and staff do not feel ownership over this service and they do not believe this service will be sustained. | 1 |

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| 1. **SENIOR LEADERSHIP ENGAGEMENT IN SUPPORTING THIS SERVICE**  * Are your senior leaders trustworthy, influential, respected, and believable? * Are they involved with the service, do they understand it, and do they promote it? * Are they respected by their peers and can they influence others to get on board? * Are they taking personal responsibility & giving time to help ensure this service is sustained? |  | Senior leaders take responsibility for efforts to sustain this service [NAME], and pharmacists and staff generally share information with and actively seek advice from the senior leaders. | 3 |
|  | Senior leaders do not take responsibility for efforts to sustain this service, but pharmacists and staff generally share information with and seek advice from the senior leaders. | 2 |
|  | Senior leaders take responsibility for efforts to sustain this process, but pharmacists and staff typically do not share information with or seek advice from the senior leaders. | 2 |
|  | Senior leaders do not take responsibility for efforts to sustain this service, and pharmacists and staff typically do not share information with or seek advice from the senior leaders. | 1 |

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| 1. **CLINIC LEADERSHIP ENGAGEMENT IN SUPPORTING THIS SERVICE**  * Are the clinic leaders trustworthy, influential, respected, and believable? * Are they involved with the service, do they understand it and do they promote it? * Are they respected by their peers and can they influence others to get on board? * Are they taking personal responsibility and giving time to help ensure this service is sustained? |  | Clinic leaders take responsibility for efforts to sustain this service [NAME], and pharmacists and staff generally share information with and actively seek advice from the clinical leaders. | 3 |
|  | Clinic leaders do not take responsibility for efforts to sustain this service, but pharmacists and staff generally share information with and seek advice from the clinical leaders. | 2 |
|  | Clinic leaders take responsibility for efforts to sustain this process, but pharmacists and staff typically do not share information with or seek advice from the clinical leaders. | 2 |
|  | Clinic leaders do not take responsibility for efforts to sustain this service and pharmacists and staff typically do not share information with or seek advice from the clinical leaders. | 1 |

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| 1. **FIT OF THIS SERVICE WITH THE ORGANIZATION’S STRATEGIC AIMS AND CULTURE**  * Has the organization successfully sustained similar services in the past? * Are the goals of this service clear and shared? * Is it contributing to the overall organizational aims? * Is this service important to the organization and its leadership? * Does your organization have a “can do” culture? |  | There is a history of successfully sustaining similar services, and the goals of this service [NAME] are consistent with the organization’s strategic aims. | 3 |
|  | There is a history of successfully sustaining similar services, but the goals of this service and organizations strategic aims are inconsistent. | 2 |
|  | There is no history of successfully sustaining similar services, but the goals of this service are consistent with the organization’s strategic aims. | 2 |
|  | There is no history of successfully sustaining similar services, and the goals of this service are inconsistent with the organization’s strategic aims. | 1 |

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| 1. **INFRASTRUCTURE FOR SUSTAINABILITY OF THIS SERVICE**  * Do you have enough quality, well-trained pharmacists and staff? * Are there enough facilities and resources to support this service? * Are new service activities built into job descriptions? * Are their policies and procedures supporting this service? * Is there a communication system in place? |  | Pharmacists, staff, facilities, job descriptions, policies, procedures, and communication systems are appropriate for sustaining this service [NAME]. | 3 |
|  | There is an appropriate level of pharmacists, staff, and facilities, but inadequate job descriptions, policies, procedures, and communication systems for sustaining this service. | 2 |
|  | The levels of pharmacists, staff, and facilities to sustain this service are not appropriate, although job descriptions, policies, procedures, and communication systems are adequate for sustaining this service. | 2 |
|  | The pharmacists, staff, facilities, job descriptions, policies, procedures, and communication systems are all not appropriate for sustaining this service. | 1 |

**Reference:** Livet, M., Blanchard, C., Richard, C., Sheppard, K., Yannayon, M., Sorensen, T., & McClurg, M. R. (2021). Measuring implementation of medication optimization services: Development and validation of an implementation outcomes questionnaire. *Research in Social and Administrative Pharmacy*.