



The American College of  
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WOMEN'S HEALTH CARE PHYSICIANS

# COMMITTEE OPINION

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## Committee on Patient Safety and Quality Improvement

*This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Patient Safety and Quality Improvement in collaboration with committee member Peter S. Bernstein, MD.*

*This document reflects emerging concepts on patient safety and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed.*

## The Use and Development of Checklists in Obstetrics and Gynecology

**ABSTRACT:** Checklists are used in medical and nonmedical settings as cognitive aids to ensure that users complete all the items associated with a particular task. They are ideal for tasks with many steps, for tasks performed under stressful circumstances, or for reminding people to perform tasks that they are not routinely accustomed to doing. In medicine, they are ideal for promoting standardized processes of care in situations in which variation in practice may increase patient risk and the chance of medical errors. Checklists also can be used to enhance teamwork and communication. It is a good idea to include frontline individuals who are involved in completing the procedure in the selection and development of the checklist. To be optimally effective, those who create checklists need to carefully plan for their design, implementation, evaluation, and revision. Checklists are valuable cognitive aids to help health care teams provide complete and timely care to patients, but checklists should be only one tool in the armamentarium to ensure that practitioners do the right thing for the right patient at the right time.

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### Recommendations

The American College of Obstetricians and Gynecologists makes the following recommendations regarding the development, implementation, and validation of checklists in health care:

- Checklists are ideal for promoting standardized processes of care in medicine for which variation in practice may increase patient risk and the chance of medical errors.
- Checklists help to confirm that all the proper steps are performed and to ensure that all team members have the necessary information to confidently and safely care for their patients.
- It is a good idea to include frontline individuals who are involved in completing the procedure in the selection and development of the checklist.
- The checklist should be tested with frontline users to get important feedback about usability. Such feedback is critical in order to modify checklists to meet the needs of the local environment.

### Introduction

Checklists have become increasingly popular in medicine as tools to improve the quality and safety of care. However, with a lack of clear evidence that checklists improve care, the increased use of checklists has the potential to create burdens on practitioners. The development and implementation of checklists should be carefully planned, and it is equally important for checklists to be reviewed on an ongoing basis to determine if a given checklist is achieving its desired aims. This document is intended to outline some of the issues surrounding the use of checklists.

### Background

Checklists are used as cognitive aids in medical and nonmedical settings to ensure that users complete all of the items associated with a particular task. They can be as simple as a grocery list or as complex as an aviation checklist. They are ideal for tasks that have many steps, for tasks performed under stressful circumstances, or for reminding people to perform tasks that they are not

accustomed to doing. In medicine, they are ideal for promoting standardized processes of care for which variation in practice may increase patient risk and the chance of medical errors. Checklists also can enhance teamwork and communication.

Relatively simple checklists can have major effects. One study found that a simple, five-item checklist significantly reduced catheter-related blood stream infections in intensive care units when carefully implemented as part of a quality improvement process (1). Another study demonstrated that the World Health Organization's Surgical Safety Checklist reduced mortality and inpatient complications across a wide variety of hospitals (2).

As a result of these landmark studies and other studies, there has been a significant increase in the development of checklists in medicine. Professional societies, hospitals, and other organizations have proposed many different checklists. Checklists appear to be inexpensive interventions that hold the promise of having a substantial effect on patient outcomes. Nevertheless, simply writing out a checklist does not mean it will have the desired effect. In order to be effective, checklists must be carefully designed and implemented.

There are important things to consider before developing and adopting a checklist. The checklist should not be used as a tool to teach someone how to properly care for a patient. The assumption is that everyone who will use the checklist is familiar with what needs to be done. Checklists are meant to be cognitive aids to ensure that nothing is forgotten. For this reason, they are particularly useful in stressful circumstances or even mundane ones in which there may be incentives to cut corners. Checklists help to confirm that all the proper steps are performed and to ensure that all team members have the necessary information to confidently and safely care for their patients. Checklists are not algorithms or care maps meant to guide clinical decision-making. Those are different sorts of tools with different processes required to develop, implement, and monitor them.

A checklist promotes standardization of care as advocated by the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine (formerly known as the Institute of Medicine) (3, 4) and the American College of Obstetricians and Gynecologists (5). When developing a checklist, care should be taken to define what its goals and scope are and how to best implement it and track its effects. It is important to select an appropriate tool best suited to address the issue. There are many other types of tools, such as algorithms, care maps, decision support tools, structured documentation systems, and standardized order sets.

## **Development of Checklists**

### **Choosing a Procedure**

The first step in creating a checklist is choosing a multi-step procedure in which an omitted or incomplete step might lead to patient harm. It is a good idea to include

frontline individuals who are involved in completing the procedure in the selection and development of the checklist.

### **What Type of Checklist Is Required?**

Is the checklist meant to be analogous to a grocery list, or to a preflight checklist? Will it be used in an emergency situation? Will the steps be performed in a predetermined sequence, or will an individual complete a set of unordered steps while a team observes and provides prompts if the individual misses an item? Some checklists are read and performed by a single individual. Others involve a "challenge and response" approach during which one individual calls out the items and another confirms that each item has been completed (6).

### **Listing the Tasks**

Typically, a checklist is a series of tasks arranged in a consistent order that allows an individual to check off each item as it is completed, verified, or answered. Care should be taken to include only those items that are important to achieve an optimal outcome and could otherwise create a potential danger if missed. Developers should ask themselves: Is this something that could be missed? And, if so, is it something that could be checked more adequately by another mechanism? Is the item something that is actionable by a member of the team? Will completing the item improve communication among team members and help ensure that they have the information needed to optimally perform their responsibilities? Thought should be given as to whether an item is mandatory and if the procedure needs to be halted if the item is not done (ie, a team member is empowered to "stop the line").

### **Ensuring Clarity and Ease of Use**

Checklists should be clear and concise so as not to burden the team. It can be challenging to find the balance between limiting the length of the list while including important items.

### **Including Patient Identifiers**

Individual institutions should determine whether or not to include patient identifiers, date and time, and other patient-specific information on a given checklist in order to make it a part of the patient's medical record. Checklists are meant to be tools to improve patient safety and, thus, do not need to be a part of the medical record.

### **Implementation of Checklists**

Drafting a checklist is one of the easier tasks; implementing it can present significant challenges. Members of the team should pay attention to when the checklist will be completed. Is there a specific time—sometimes referred to as a "pause point"—for the checklist to be done, such as before an operative procedure? If so, it may be easier to implement the checklist for procedures like an operative vaginal delivery or an office hysteroscopy. Checklists designed to help manage emergencies may be a challenge

because it may not be clear when a given circumstance has crossed into a crisis situation. Therefore, careful training may be needed to ingrain the habit of turning to the checklist in a given circumstance.

There are three other important considerations:

1. Each checklist should be readily accessible to the team in an emergency situation. Checklists can be turned into posters and mounted on the walls in operating rooms, kept in a binder at the patient's bedside or embedded into electronic health records and used as a forcing function, or made into laminated cards to be hung from equipment carts or into forms to be placed in equipment packages.
2. Who completes the checklist and signals when it is time to use it? Should there be someone who is designated as a reader who does not have responsibilities other than completing the checklist and maybe monitoring how much time has passed?
3. Given that teams may not be in the habit of using checklists, how will they become accustomed to using them? Should simulation training be employed? Should visual cues be created such as marking a spot on the floor where the checklist reader should stand? All of these issues need to be addressed to ensure successful implementation. Critical to this is strong but flexible leadership that is focused on the goal of improving the quality of care and willing to accept input from frontline users.

Many health care teams are used to working without checklists, and it can be challenging to change such a long-practiced habit. Even well-intentioned practitioners

may forget to employ these tools. However, in one study, 97% of practitioners reported that if they were the patient, they would want the team to use a checklist during a critical event (7).

## Validation of Checklists

Once a team has implemented a checklist, it is important to ensure that the checklist is accomplishing its intended purpose. Does the checklist help the team identify errors or oversights in time to be corrected? The checklist should be tested with frontline users to get important feedback about usability. Such feedback is critical in order to modify checklists to meet the needs of the local environment. It is expected that any given checklist will need to be adapted to fit local practice settings. Ongoing monitoring, feedback, review, and revisions will make the checklist more effective, and this, in turn, may engage staff and make the adoption of the checklist more acceptable. For any given checklist, the ideal objective measure is being able to demonstrate that it improves communication and enhances patient safety; this level of evidence should continue to be sought. Sharing successes with practitioners will increase the acceptability of a checklist and foster its adoption.

## Conclusion

Checklists are valuable cognitive aids to help health care teams provide complete and timely care to patients. To be optimally effective, those charged with creating checklists need to carefully plan for their design, implementation, evaluation, and revision (see Table 1) (8). Failure to do this may lead to unexpected consequences and unnecessary burdens for practitioners. Checklists should be only

**Table 1.** A Checklist for Checklists ↩

Development	Drafting	Validation
<input type="checkbox"/> Do you have clear, concise objectives for your checklist? <hr/> Is each item: <ul style="list-style-type: none"> <li><input type="checkbox"/> A critical safety step and in great danger of being missed?</li> <li><input type="checkbox"/> Not adequately checked by other mechanisms?</li> <li><input type="checkbox"/> Actionable, with a specific response required for each item?</li> <li><input type="checkbox"/> Designed to be read aloud as a verbal check?</li> <li><input type="checkbox"/> One that can be affected by the use of a checklist?</li> </ul> <hr/> Have you considered: <ul style="list-style-type: none"> <li><input type="checkbox"/> Adding items that will improve communication among team members?</li> <li><input type="checkbox"/> Involving all members of the team in the checklist creation process?</li> </ul>	Does the Checklist: <ul style="list-style-type: none"> <li><input type="checkbox"/> Utilize natural breaks in workflow (pause points)?</li> <li><input type="checkbox"/> Use simple sentence structure and basic language?</li> <li><input type="checkbox"/> Have a title that reflects its objectives?</li> <li><input type="checkbox"/> Have a simple, uncluttered, and logical format?</li> <li><input type="checkbox"/> Fit on one page?</li> <li><input type="checkbox"/> Minimize the use of color?</li> </ul> <hr/> Is the font: <ul style="list-style-type: none"> <li><input type="checkbox"/> Sans serif?</li> <li><input type="checkbox"/> Upper and lower case text?</li> <li><input type="checkbox"/> Large enough to be read easily?</li> <li><input type="checkbox"/> Dark on a light background?</li> <li><input type="checkbox"/> Are there fewer than 10 items per pause point?</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> Is the date of creation (or revision) clearly marked?</li> </ul>	Have you: <ul style="list-style-type: none"> <li><input type="checkbox"/> Tried the checklist with frontline users (either in a real or simulated situation)?</li> <li><input type="checkbox"/> Modified the checklist in response to repeated trials?</li> </ul> <hr/> Does the checklist: <ul style="list-style-type: none"> <li><input type="checkbox"/> Fit the flow of work?</li> <li><input type="checkbox"/> Detect errors at a time when they can still be corrected?</li> </ul> <hr/> <ul style="list-style-type: none"> <li><input type="checkbox"/> Can the checklist be completed in a reasonably brief period of time?</li> <li><input type="checkbox"/> Have you made plans for future review and revision of the checklist?</li> </ul>

Please note: A checklist is NOT a teaching tool or algorithm.

Reprinted from Project Check, a checklist for checklists. Available at: [http://www.projectcheck.org/uploads/1/0/9/0/1090835/checklist\\_for\\_checklists\\_final\\_10.3.pdf](http://www.projectcheck.org/uploads/1/0/9/0/1090835/checklist_for_checklists_final_10.3.pdf). Retrieved July 8, 2016; last updated January 14, 2010.

one tool in the armamentarium to ensure that practitioners do the right thing for the right patient at the right time.

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