



EVIDENCE-BASED PRACTICE

Step by Step

Implementing an Evidence-Based Practice Change

Beginning the transformation from an idea to reality.

This is the ninth article in a series from the Arizona State University College of Nursing and Health Innovation's Center for the Advancement of Evidence-Based Practice. Evidence-based practice (EBP) is a problem-solving approach to the delivery of health care that integrates the best evidence from studies and patient care data with clinician expertise and patient preferences and values. When delivered in a context of caring and in a supportive organizational culture, the highest quality of care and best patient outcomes can be achieved.

The purpose of this series is to give nurses the knowledge and skills they need to implement EBP consistently, one step at a time. Articles will appear every other month to allow you time to incorporate information as you work toward implementing EBP at your institution. Also, we've scheduled "Chat with the Authors" calls every few months to provide a direct line to the experts to help you resolve questions. Details about how to participate in the next call will be published with *May's Evidence-Based Practice, Step by Step*.

In January's evidence-based practice (EBP) article, Rebecca R., our hypothetical staff nurse, Carlos A., her hospital's expert EBP mentor, and Chen M., Rebecca's nurse colleague, began to develop their plan for implementing a rapid response team (RRT) at their institution. They clearly identified the purpose of their RRT project, the key stakeholders, and the various outcomes to be measured, and they learned their internal review board's requirements for reviewing their proposal. To determine their next steps, the team consults their EBP Implementation Plan (see Figure 1 in "Following the Evidence: Planning for Sustainable Change," January). They'll be working on items in checkpoints six and

seven: specifically, engaging the stakeholders, getting administrative support, and preparing for and conducting the stakeholder kick-off meeting.

ENGAGING THE STAKEHOLDERS

Carlos, Rebecca, and Chen reach out to the key stakeholders to tell them about the RRT project by meeting with them in their offices or calling them on the phone. Carlos leads the team through a discussion of strategies to promote success in this critical step in the implementation process (see *Strategies to Engage Stakeholders*). One of the strategies, *connect in a collaborative way*, seems especially applicable to this project. Each team member is able to meet with a stakeholder in person, fill them in on the RRT project, describe the purpose of an RRT, discuss their role in the project, and answer any questions. They also tell each stakeholder about the initial project meeting to be held in a few weeks.

In anticipation of the stakeholder kick-off meeting, Carlos and the team discuss the fundamentals of preparing for an

important meeting, such as how to set up an agenda, draft key documents, and conduct the meeting. They begin to discuss a time and date for the meeting. Carlos suggests that Rebecca and Chen meet with their nurse manager to update her on the project's progress and request her help in scheduling the meeting.

SECURING ADMINISTRATIVE SUPPORT

After Rebecca updates her manager, Pat M., on the RRT project, Pat says she's impressed by the team's work to date and offers to help them move the project forward. She suggests that, since they've already invited the stakeholders to the upcoming meeting, they use e-mail to communicate the meeting's time, date, and place. As they draft this e-mail together, Pat shares the following tips to improve its effectiveness:

- communicate the essence and importance of the e-mail in the subject line
- write an e-mail that's engaging, but brief and to the point
- introduce yourself
- explain the project

Strategies to Engage Stakeholders

- Spend time and effort building trust.
- Understand stakeholders' interests.
- Solicit input from stakeholders.
- Connect in a collaborative way.
- Promote active engagement in establishing metrics and outcomes to be measured.

- welcome the recipients to the project and/or team and invite them to the meeting
- explain why their attendance is critical
- request that they read certain materials prior to the meeting (and attach those documents to the e-mail)
- let them know whom to contact with questions
- request that they RSVP
- thank them for their participation

Before they send the e-mail (see *Sample E-mail to RRT and Stakeholders*), the team wants to make sure they don't miss anyone, so they review and include all of the RRT members and stakeholders. They realize that it's important to invite the manager of each of the stakeholders and disciplines represented on the RRT and ask

them to also bring a staff representative to the meeting. In addition, they copy the administrative directors of the stakeholder departments on the e-mail to ensure that they're fully aware of the project.

PREPARING FOR THE KICK-OFF MEETING

The group determines that the draft documents they'll need to prepare for the stakeholder kick-off meeting are:

- an agenda for the meeting
- the RRT protocol
- an outcomes measurement plan
- an education plan
- an implementation timeline
- a projected budget

To expedite completion of the documents, the team divides them up among themselves. Chen volunteers to draft the RRT protocol and outcomes measurement plan.

Carlos assures her that he'll guide her through each step. Rebecca decides to partner with her unit educator to draft the education plan. Carlos agrees to take the lead in drafting the meeting agenda, implementation timeline, and projected budget, but says that since this is a great learning opportunity, he wants Rebecca and Chen to be part of the drafting process.

Drafting documents. Carlos tells the team that the purpose of a draft is to initiate discussion and give the stakeholders an opportunity to have input into the final product. All feedback is a positive sign of the stakeholders' involvement, he says, and shouldn't be perceived as criticism. Carlos also offers to look for any templates from other EBP projects that may be helpful in drafting the documents. He tells Rebecca

Sample E-mail to RRT and Stakeholders

To: ICU Nurse Manager, 3 North Nurse Manager, Respiratory Therapy Director, Medical Director of ICU, Director of Acute Care NP Hospitalists, Director of Spirituality Department

cc: EBP Council Chair, VP Nursing, VP Medical Affairs, ICU Nursing Director, Medical-Surgical Nursing Director, Finance Department Director, Communications Department Director, Risk Management Director, Education Department Director, HIM (Medical Records) Director, Quality/Performance Improvement Director, Clinical Informatics Director, Pharmacy Director

Subject: Invitation to the Rapid Response Project Stakeholder Kick-off Meeting

Good afternoon. I would like to introduce myself. My name is Rebecca R. I am a staff nurse III on the 3 North medical-surgical unit. You have either spoken with me or with one of my colleagues, Carlos A. or Chen M., about an important evidence-based initiative that will help improve the quality of care for our patients. The increasing patient acuity on our unit and throughout the hospital, and the frequent need for patients to be transferred to the ICU, prompted us to ask important questions about patient outcomes. For the past few months, Carlos, Chen, and I have been investigating how our hospital can reduce the number of codes, particularly outside the ICU. We have conducted a thorough search for and appraisal of current available evidence, which we would like to share with you.

Our team and our managers would like to invite you to participate in a kick-off meeting to discuss an exciting evidence-based initiative to improve the quality of patient care in our hospital. The meeting will be held on March 1, 2011, at 10 AM in the Innovation Conference Room on the 2nd floor. It is very important that you attend this meeting as you have been identified as a critical participant in this project. We need your input and support as we move forward. So please plan to attend the meeting or send a representative. To ensure that we have sufficient materials for the meeting, please RSVP to Mary J., unit secretary on 3 North.

I want to thank you in advance for your help with and support of this project. I look forward to seeing you at the meeting. If you have any questions, please feel free to contact me or any of the RRT project team members.

Rebecca R. and the RRT Project Team

RRT Protocol Draft for Review

Current evidence supports the effectiveness of an RRT in decreasing adverse events in patients who exhibit specific clinical parameters. Evidence-based recommendations include that RRTs should be available on general units of hospitals, 24 hours a day and seven days a week, staffed by intensive care clinicians, and activated based on established clinical criteria. The RRT serves a dual purpose of providing both early intervention care to at-risk patients and education in recognizing and managing these patients to clinical staff.

The RRT is available to respond to and assist bedside staff in caring for patients who develop signs or symptoms of clinical deterioration.

RRT Members

RRT members are all ACLS certified. They include:

Team Leader: Acute Care NP Hospitalist (credentialed in advanced procedures)

Team Members: ICU RN

Respiratory Therapist (trained in intubation)

Physician Intensivist (ICU MD on call and available to the RRT)

Hospital Chaplain

Initiation of RRT Consult

An RRT consult can be initiated by any bedside clinician. Consults should be initiated based on the following patient status criteria.

RRT Consult Initiation Criteria

Pulmonary
Ventilation: Color change (pale, dusky, gray, or blue)
Respiratory distress: RR < 10 or > 30 breaths/min, or Unexplained dyspnea, or New-onset difficulty breathing, or Shortness of breath
Cardiovascular
Tachycardia: Unexplained > 130 beats/min for 15 mins
Bradycardia: Unexplained < 50 beats/min for 15 mins
Blood pressure: Unexplained SBP < 90 or > 200 mmHg
Chest pain: Complaint of nontraumatic chest pain
Pulse oximetry: < 92% SpO ₂
Perfusion: UOP < 50 cc/4 hr
Neurologic
Seizures: Initial, repeated, or prolonged
Change in mental status: Sudden decrease in LOC with normal blood sugar Unexplained agitation for > 10 min New-onset limb weakness or smile droop
Sepsis
Clinical indicators of sepsis: Temperature > 38°C
HR > 90 beats/min
RR > 20 breaths/min
WBC > 12,000, < 4,000
Nurse's concern about overall deterioration in patient's condition without any of the above criteria.

Scope of the RRT

The RRT can be expected to perform any/all of the following interventions:

Nasopharyngeal/oropharyngeal suctioning

Oxygen therapy

Initiation of CPAP
Initiation of nebulized medications
Intravenous fluid bolus(es)
Intravenous fluid bolus(es) with medication
CPR

The RRT can be expected to perform any/all of the following invasive procedures:

Endotracheal intubation
Intravenous line insertion
Intraosseous line insertion
Arterial line insertion
Central line insertion

RRT Consult Procedure

1. Assess patient relative to the above criteria.
2. If any of the above criteria are identified, initiate the RRT consult by calling 5-5555. The operator will request the caller's location, the patient's name, the patient's location, and the reason for RRT activation. This call will generate both pages to the RRT members and an overhead announcement.
3. The RRT will arrive within five minutes (or less) of the call.
4. Be prepared to provide the RRT with appropriate information about the patient using the SBAR communication method. (See standardized communication protocol no. 7.)
5. While awaiting the arrival of the RRT, consider initiating any/all of the following actions:
 - Call for a colleague to help you
 - Set up oxygen apparatus
 - Set up suction apparatus
 - Call for the code cart to be brought to the area
 - Communicate with the patient's family (if present); tell them what you're doing and why and that someone will be here shortly to help them
 - Obtain proper documentation tools to be used during the RRT consult

RRT Arrival

When the RRT arrives:

1. Provide information as indicated above.
2. Participate in the care of your patient and remain with the patient and the RRT.
3. Assist the RRT as needed.
4. Document activities, interventions performed, and patient responses to interventions.
5. Work with the chaplain to ensure that the patient's family is informed of the situation at intervals.
6. Assist in arranging for transfer of the patient to a higher level of care if indicated.
7. Provide a detailed report to the nurse accepting the patient on the receiving unit, utilizing the SBAR communication method.

ACLS = advanced cardiac life support; cc = cubic centimeters; CPAP = continuous positive airway pressure; CPR = cardiopulmonary resuscitation; hr = hours; HR = heart rate; ICU = intensive care unit; LOC = level of consciousness; MD = medical doctor; min = minute; mmHg = millimeters of mercury; NP = nurse practitioner; RN = registered nurse; RR = respiratory rate; RRT = rapid response team; SBAR = situation-background-assessment-recommendation; SBP = systolic blood pressure; SpO₂ = arterial oxygen saturation; UOP = urine output; WBC = white blood count.

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Table 1. Plan for Measuring RRT Success (Draft for Discussion)

Outcome	Measurement	Source/Owner
CRO	<ul style="list-style-type: none"> Codes outside of the ICU 	<ul style="list-style-type: none"> EMR
Mortality rates: HMR and NIM	<ul style="list-style-type: none"> Hospital mortality rates by unit 	<ul style="list-style-type: none"> Discuss at meeting
UICUA	<ul style="list-style-type: none"> ICU admissions <ul style="list-style-type: none"> planned unplanned 	<ul style="list-style-type: none"> EMR; ICU admissions database; check box needed to indicate planned and unplanned
Return on RRT investment (cost of RRT compared with savings due to RRT)		
1. Cost of RRT <ul style="list-style-type: none"> Personnel Supplies 	<ul style="list-style-type: none"> RRT personnel cost/hour 	<ul style="list-style-type: none"> Billing data RRT response time and end time as recorded on the RRT data documentation tool
2. Savings due to RRT <ul style="list-style-type: none"> Cost of UICUA Number of UICUA prevented 	<ul style="list-style-type: none"> UICUA cost/day LOS for average UICUA Number of UICUA prevented 	<ul style="list-style-type: none"> Billing data Disposition of RRT call as recorded on the RRT data documentation tool

CRO = code rates outside the ICU; EMR = electronic medical record; HMR = hospital-wide mortality rates; ICU = intensive care unit; LOS = length of stay; NIM = non-ICU mortality; RRT = rapid response team; UICUA = unplanned ICU admissions.

and Chen that he's confident they'll do a great job and shares his excitement at how the team has progressed in planning an EBP practice change.

RRT protocol. Chen starts to draft the RRT protocol using one of the hospital's protocols as a template for the format, as well as definitions and examples of protocols, policies, and procedures from other organizations and the literature. She returns to the articles from the team's original literature search (see "Critical Appraisal of the Evidence: Part I," July 2010) to see if there is information, previously appraised, that will be helpful in this current step in the process. She recalls that the team had set aside some articles because they didn't directly answer the PICOT question about *whether* to implement an RRT, but they did have valuable information on *how* to implement an RRT. In reviewing these articles, Chen selects one that's a review of the literature, though not a systematic review, that includes

many examples of RRT membership rosters and protocols used in other hospitals, and which will be helpful in drafting her RRT protocol document.¹ Chen includes this expert opinion article because the information it contains is consistent with the higher-level evidence already being used in the project. Using both higher and lower levels of evidence, when appropriate, allows the team to use the best information available in formulating their RRT protocol.

As she writes, Chen discovers that their hospital's protocols and other practice documents don't include a section on supporting evidence. Knowing that evidence is critically important to the RRT protocol, she discusses this with the clinical practice council representative from her unit who advises her to add the section to her draft document. He promises to present this issue at the next council meeting and obtain the council's approval to add an evidence section to all future practice documents.

Chen reviews the finished product before she submits it for the team's review (see *RRT Protocol Draft for Review*¹⁻¹⁰).

Outcomes measurement plan.

Based on the appraised evidence and the many discussions Rebecca and Chen have had about it, Chen drafts a document that lists the outcomes the team will measure to demonstrate the success of their project, where they'll obtain this information, and who will gather it (see Table 1). In drafting this plan, Chen realizes that they don't have all the information they need, and she's concerned that they're not ready to move forward with the stakeholder kick-off meeting. But when Chen calls Carlos and shares her concern, Carlos reminds her that the document is a draft and that the required information will be addressed at the meeting.

Education plan. Rebecca reaches out to Susan B., the clinical educator on her unit, and requests her help in drafting the education plan. Susan tells Rebecca how much

she enjoys the opportunity to work collaboratively with staff nurses on education projects and how happy she is to see an EBP project being implemented. Rebecca shares her RRT project folder (containing all the information relative to the project) with Susan, focusing on the education about the project she thinks the staff will need. Susan commends the team for its efforts, as a good deal of the necessary work is already done. She asks Rebecca to clarify both the ultimate goal of the project and what's most important to the team about its rollout on the unit. Rebecca thoughtfully responds that the ultimate goal is to ensure that patients receive the best care possible. What's most important about its rollout is that the staff sees the value of an RRT to the patients and its positive impact on their own workload. She adds that it's

important to her that the project be conducted in a way that feels positive to the staff as they work toward sustainable changes in their practices.

Susan and Rebecca discuss which clinicians will need education on the RRT. They plan to use a variety of mechanisms, including in-services, e-mails, newsletters, and flyers. From their conversation, Susan agrees to draft an education plan using a template she developed for this purpose. The template prompts her to put in key elements for planning an education program: learner objectives, key content, methodology, faculty, materials, time frame, and room location. Susan fills the template with information Rebecca has given her, adding information she knows already from her experience as an educator. When Rebecca and

Susan meet to review the plan, Rebecca is amazed to see how their earlier conversation has been transformed into a comprehensive document (see the *Education Plan for RRT Implementation* at <http://links.lww.com/AJN/A19>).

Agenda and timeline. The team meets to draft the meeting agenda, implementation timeline, and budget. Carlos explains the purposes of a meeting agenda: to serve as a guide for the participants and to promote productivity and efficiency. They draft an agenda that includes the key issues to be shared with the stakeholders as well as time for questions, feedback, and discussion (see the *Rapid Response Team Kick-off Meeting Agenda* at <http://links.lww.com/AJN/A20>).

Carlos describes how the timeline creates a structure to guide

Table 3. RRT Project Budget Draft (Draft for Discussion)

Annual Costs						
Item	Projected Cost/Unit	No. Units Needed	Cost/Year	Cost Center	Approval Needed	Notes:
RRT pagers	\$30/month	8/month	\$2,880	Administration	VP Nursing	
Data collection	RRT leader, \$45/hour	1 hour/month	\$540	Hospitalist	VP Medical Affairs	
Data entry	Administrative assistant, \$15/hour	1 hour/month	\$180	Nursing administration	Medical-surgical director	
Data analysis	Data manager, \$21/hour	1 hour/month	\$252	Quality	Quality manager	
First Year Start-Up Costs						
Education prep	Advanced practice nurse, \$45/hour	6 hours	\$270	3 North Nursing	3 North Nurse manager	Unit educators will schedule their time to provide the in-services. No additional cost.
	2 Project leaders, \$30/hour	6 hours each	\$360			
	Nurse manager, \$40/hour	2 hours	\$80			
			Total = \$710			
Education delivery	80 Staff members, \$30/hour (average rate)	1/2 hour each	\$1,200	Departmental education budgets	Department managers	This is the cost for the pilot unit only.



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the project (see Table 2 at <http://links.lww.com/AJN/A21>). The team further discusses how it can maintain the project's momentum by keeping it moving forward while at the same time accommodate unexpected delays or resistance. There are a few items on the timeline that Carlos thinks may be underestimated—for example, the team may need more than a month to meet with other departments because of already heavily scheduled calendars—but he decides to let it stand as drafted, knowing that it's a guide and can be adjusted as the need arises.

With the RRT protocol, staff will be intervening earlier to improve patients' outcomes.

Budget. Carlos discusses the budget with the team. Rebecca shares a list of what she thinks they'll need for the project and the team decides to put this information into a table format so they can more easily identify any missing information. Before they construct the table, they walk through an imaginary RRT call to be sure they've thought of all the budget implications of the project. They realize they didn't include the cost of each employee attending an education session, so they add that figure to the budget. They also realize that they're missing hourly pay rates for the different types of employees involved. Carlos tells Rebecca that he'll work with the Human Resources Department to obtain this information before the meeting so they can complete the budget (see Table 3).

REVIEWING THEIR WORK

The next time they meet, the EBP team reviews the agenda for the meeting and the documents they'll

be presenting. The clerical person on Rebecca and Chen's floor (sometimes called the unit secretary) has kept a record of who's attending the meeting and the team is pleased that most of the stakeholders are coming. Carlos informs the team that he received notification that their internal review board submission has been approved. They're excited to check that step off on their EBP Implementation Plan.

Carlos suggests that they discuss the kick-off meeting in detail and brainstorm how to prepare for any negative responses to their project that might occur. Rebecca

and Chen remark that they've never considered that someone might not like the idea of an RRT. Carlos says he's not surprised; often the passion that builds around an EBP project and the hard work put into it precludes taking time to think about "why not." The team talks about the importance of stopping occasionally during any project to assess the environment and participants, recognizing that people often have different perspectives and that everyone may not support a change. Carlos reminds the team that people may simply resist changing the routine, and that this can lead to the sabotage of a new idea. As they explore this possible resistance, Rebecca shares her concern that with everyone in the hospital so busy, adding something new may be too stressful for some people. Carlos tells Rebecca and Chen that helping project participants realize they'll be doing the same thing they've been doing, just in a more efficient and effective way, is generally successful in helping them

accept a new process. He reminds them that many of the people on the RRT are the same people who currently take care of patients if they code or are admitted to the ICU; however, with the RRT protocol, they'll be intervening earlier to improve patients' outcomes. The team feels confident that, if needed, they can use this approach at the kick-off meeting.

CONDUCTING THE KICK-OFF MEETING

Rebecca and Chen are both nervous and excited about the meeting. Carlos has made sure they're well prepared by helping them set up the meeting room, computer, PowerPoint presentation, and handout packets containing the agenda and draft documents. The team is ready, and they've placed themselves at the head of the table so they can be visible and accessible. As the invitees arrive, they welcome each one individually, thanking them for participating in this important meeting. The team makes sure that the meeting is guided by the agenda and moves along through the presentation of information to thoughtful questions and a lively discussion.

Join the EBP team next time as they launch the RRT project and tackle the real-world issues of project implementation. ▼

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