There are a bunch of stories starting to come out based on some press and paper releases from the CDC yesterday. One that seems well done is this from CIDRAP: [CDC notes progress, threat regarding hospital superbugs | CIDRAP](http://cidRAP).

Today’s CDC report focused on the six most concerning antibiotic-resistant bacteria and found better progress against them in short-term healthcare settings.

Basically, there is some good news and some bad news.

The good news:

Hospital acquired infections in acute care hospitals are showing some improvements:

1. “A 50 percent decrease in central line-associated bloodstream infections (CLABSIs) between 2008 and 2014.”
2. “A 17 percent decrease in surgical site infections (SSIs) between 2008 and 2014 related to 10 procedures tracked in previous HAI progress reports.”
3. “No change in the overall catheter-associated urinary tract infections (CAUTIs) between 2009 and 2014. During this time, however, there was progress in non-ICU settings, progress in all settings between 2013 and 2014, and most notably, even more progress in all settings towards the end of 2014.”
4. “CDC’s annual progress report shows that progress has been made in decreasing hospital-onset C. difficile infections by 8 percent between 2011 and 2014.”

Ok so #3 of those above is not so much good news, but it is maybe neutral. But then the bad news:

But then the bad news:

- “In acute care hospitals, 1 in 7 catheter- and surgery-related HAIs can be caused by any of the six antibiotic-resistant bacteria listed below. That number increases to 1 in 4 infections in long-term acute care hospitals, which treat patients who are generally very sick and stay, on average, more than 25 days. The six antibiotic-resistant threats examined are:
  - Carbapenem-resistant Enterobacteriaceae (CRE)
  - Methicillin-resistant Staphylococcus aureus (MRSA)
  - ESBL-producing Enterobacteriaceae (extended-spectrum β-lactamases)
  - Vancomycin-resistant Enterococcus (VRE)
  - Multidrug-resistant Pseudomonas aeruginosa
  - Multidrug-resistant Acinetobacter”
“1 in 6 remaining CLABSIs are caused by urgent or serious antibiotic-resistant bacteria.”
“1 in 7 remaining SSIs are caused by urgent or serious antibiotic-resistant bacteria.”
“1 in 10 CAUTIs are caused by urgent or serious antibiotic-resistant bacteria.”
So that is kind of scary. What can we do? They say:

- CDC is calling on doctors, nurses, health care facility administrators, and state and local health departments to continue to do their part to prevent HAIs. The report recommends doctors and nurses combine three critical efforts to accomplish this:
  - Prevent the spread of bacteria between patients;
  - Prevent infections related to surgery and/or placement of a catheter; and
  - Improve antibiotic use through stewardship.
  “For clinicians, prevention means isolating patients when necessary,” said Clifford McDonald, M.D., Associate Director for Science at CDC’s Division of Healthcare Quality Promotion. “It also means being aware of antibiotic resistance patterns in your facilities, following recommendations for preventing infections that can occur after surgery or from central lines and catheters placed in the body, and prescribing antibiotics correctly.”

I don’t know about you but this does not overwhelm me as a plan since, well, who knows if people will follow this. Fortunately, the CDC got some $160 million extra related to the National Action Plan for Combating Antibiotic-resistant Bacteria. And with this money they plan to:

- accelerating outbreak detection and prevention in every state;
- enhancing tracking of resistance mechanisms and resistant infections;
- supporting innovative research to address current gaps in knowledge; and
- improving antibiotic use.

Oh, and they made some nice infographics about the topic:
HOSPITAL ACQUIRED INFECTIONS - THE GOOD NEWS AND THE SUPER NEWS (BUT NOT SUPER IN A GOOD WAY)  

**NATIONAL ACUTE CARE HOSPITALS**

Healthcare-associated infections (HAI) are infections patients can get while receiving medical treatment in a healthcare facility. Working toward the elimination of HAIs is a CDC priority. For more information on HAI prevention progress, visit: www.cdc.gov/hai/progress-report/index.html.

**CLABSIs**
- 1 in 6 CLABSIs were caused by urgent or serious antibiotic-resistant threats.

**CAUTIs**
- 1 in 10 CAUTIs were caused by urgent or serious antibiotic-resistant threats.

**SSIs**
- 1 in 7 SSIs were caused by urgent or serious antibiotic-resistant threats.

**C. difficile Infections**
- 9 in 10 patients diagnosed with C. difficile are related to healthcare.

SOURCE: CDC Vital Signs, March 2016. Data used for this analysis was reported to CDC's National Healthcare Safety Network.
Some more coverage of the CDC releases

- Oregon Live: CDC: Superbugs cause 1 in 7 infections caught in hospital
- UPI: CDC: Hospitals making progress against ‘superbugs’
  - “To combat the problem of antibiotic-resistant infections, the CDC is calling on doctors, nurses and hospital staff to continue to prevent the spread of bacteria between patients. The CDC is also asking healthcare professionals to reduce infections related to surgery and placement of catheters. The agency is also calling for cautious use of antibiotics to help fight resistance.”
- NBC News America’s Germiest Hospitals? The Answer May Surprise You
- USA Today by Liz Szabo: Rates of some hospital-acquired infections fall by 50%
  - “Americans developed 722,000 infections related to health care in 2011, according to a report released Thursday by the Centers for Disease Control and Prevention. Such infections wouldn’t have developed if people hadn’t gone to a hospital or nursing home. About 75,000 patients with these infections died.”
- Arizona Daily Star: Arizona hospital infections drop, but superbugs still pose threat
- Maryn McKenna at Germination: Some US Hospital Infections Dropping, But Superbug Risks Are High. Some quotes below:
  - In a phone briefing with reporters, Dr. Thomas Frieden, the CDC’s director, called the high levels of resistance in infections in long-term care facilities—more than one in four of each infection—“chilling.” Asked how he would describe the rate in regular hospitals, which exceeds one in seven, he replied: “deeply concerning.”
  - Dr. Peter Pronovost, director of the Armstrong Institute for Patient Safety and Quality at Johns Hopkins—an early champion of cockpit-style checklists to prevent healthcare infections, who was also on the call to reporters—added: “We need things to better identify organisms faster, so we could implement appropriate checklists. We need to better understand when surfaces are clean very much earlier, so we know if our cleaning efforts are effective. And we need to have better regional and networked information systems, so we know what resistance patterns are in community hospitals and longterm care facilities, and be able to link them when patients come to acute-care hospitals and then go back again.”
- Mike the Mad Biologist: An Atlas Of Antibiotic Resistance

And some Twitter posts of possible interest
New #VitalSigns focuses on connection between #antibiotic-resistant bacteria & healthcare-associated infections https://t.co/mTAc6GkSfP

— Dr. Tom Frieden (@DrFriedenCDC) March 3, 2016

On any given day, 1 in 25 hospital patients has at least one healthcare-associated infection that they did not come in with. #VitalSigns

— Dr. Tom Frieden (@DrFriedenCDC) March 3, 2016

Of 18 #antibiotic-resistant bacteria identified as health threats in 2013 by CDC, nearly half cause healthcare-associated infections.

— Dr. Tom Frieden (@DrFriedenCDC) March 3, 2016

Prevent spread of bacteria btwn patients. Prevent infections related to catheters, surgeries. Improve antibiotic stewardship. #VitalSigns

— Dr. Tom Frieden (@DrFriedenCDC) March 3, 2016

Links to the CDC releases

- Vital Signs: Preventing Antibiotic-Resistant Infections in Hospitals — United States, \n2014
- Press release: Superbugs threaten hospital patients
- CDC’s Antibiotic Resistance Patient Safety Atlas

Other Material from CDC

- HAI Data and Statistics
- HAI prevention progress and activity in your state
- HAI Progress Report FAQ
- Patient Safety: What you can do to be a safe patient
- Preventing HAIs.
- HAI Prevention Toolkits
- Targeted Assessment for Prevention (TAP)

Also of interest/relevance:

- National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination
- Understanding the Role of Facility Design in the Acquisition and Prevention of Healthcare-Associated Infections from HERD Journal
- Infection Control and the Built Environment: No Easy Answers
- Moving toward elimination of healthcare-associated infections: A call to action
- Approaches for Preventing Healthcare-Associated Infections: Go Long or Go Wide?
- Advances in the Prevention and Control of HAIs – by AHRQ
- Hospital organisation, management, and structure for prevention of health-care-associated infection: a systematic review and expert consensus. PDF.