What is the D2B Alliance?

- ACC quality initiative launched in partnership with the Institute for Healthcare Improvement
- Disseminating evidence-based strategies and sharing best practices among participants
- Launched in November 2006 and ongoing
- More than 1,000 participating hospitals from across the U.S. and internationally
Why the D2B Alliance?

Nearly **400,000** patients are admitted to U.S. hospitals with STEMI.

ACC/AHA guidelines recommend D2B times of **90** minutes or less.

Studies have shown **strong associations** between time to primary PCI and in-hospital mortality risk.
D2B Alliance: Closing a Gap

Overarching Goal

Achieve and sustain D2B times of \( \leq 90 \text{ minutes} \) for at least 75% of non-transfer primary PCI patients with STEMI.
D2B Alliance: How it Works

Provides hospitals with the key evidence based strategies and support tools

Focus on process improvement, parallel processing and interdisciplinary cooperation and coordination

Opportunities for sharing findings and best practices
D2B Alliance: Key Strategies

- ED physician activates the cath lab
- One call activates the cath lab
- Cath lab team ready in 30 minutes
- Prompt data feedback
- Pre-hospital ECG activates the cath lab (optional)
The Team Behind the Strategies

- Pre-hospital Staff (EMS)
- Emergency Medicine Physician
- Initial Cardiology Care Provider
- Registration Personnel (Clerk or Triage Nurse)

- Cardiac Cath Lab Staff
- Primary, Non-physician, Patient Care Provider
- Interventional Cardiologist

- “STEMI Alert” Activator (ED Switchboard, Hospital Operator)
- Initial Patient Care Provider (EMT, Primary ED Nurse, ED Charge Nurse)

Support Staff
- Phlebotomist
- Radiology Tech
- Daytime Cath Lab charge person
- CV research personnel
- hospital admitting
- other-transport, pharmacy
- perfusionist
- etc.
D2B Alliance Results

Since D2B launched in 2006, D2B times have significantly decreased to be less than 90 minutes in hospitals across the United States.

By March 2008, over 75 percent of patients in D2B Alliance-participating hospitals had D2B times of less than 90 minutes.
• ED physician activation of the cath lab and immediate patient transfer to the cath lab by an in-house nursing team led to a substantial reduction in D2B time and reductions in myocardial infarct size and decreased length of stay.

• With this improvement in quality, total hospital costs decreased substantially for the initial hospitalization and subsequent care within one-year post-hospital discharge.

D2B Times for Patients Undergoing PCI Following Acute MI

Krumholz H, et al.
Improvements in Door-to-Balloon Time in the United States, 2005 to 2010.
Circulation (August 2011)

- Over 90% of patients receiving primary percutaneous coronary intervention for ST-segment elevation myocardial infarction (STEMI) are now treated within the recommended 90 minutes after hospital arrival.

Percent of Patients with D2B Time Under...

Krumholz H, et al.  
*Improvements in Door-to-Balloon Time in the United States, 2005 to 2010.*  
Patient Demographics: *Decrease in D2B Times*

- 38%: 75+ Years-Old
- 35%: Women
- 42%: African Americans

*Krumholz H, et al.*  
*Improvements in Door-to-Balloon Time in the United States, 2005 to 2010.*  
Hospital Demographics: Decrease in D2B Times

- 34% • More than 500 beds
- 38% • For-profit
- 40% • East South Central Region
- 35% • Mid-Atlantic Region

• Overall Results:
  
  o National D2B times for STEMI patients have improved

  o The percentage of patients meeting the guideline recommendation of 90 minutes or less has increased

  o BUT in-hospital and short-term mortality has remained unchanged

D2B
Continued improvements in meeting guideline-recommended Door-to-Balloon (D2B) times of 90 minutes or less for both ICD and CathPCI patients.

<table>
<thead>
<tr>
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<th>2008</th>
<th>2011</th>
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<tbody>
<tr>
<td>Non-Transfer Patients</td>
<td>81%</td>
<td>94.2%</td>
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<tr>
<td>Transfer Patients</td>
<td>18%</td>
<td>30.4%</td>
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What is inspiring is how the cardiologists came together to improve care – leading change within their institutions even as it required them to work harder – because it was the right thing to do.

Harlan Krumholz, MD, FACC
The incredible success of the D2B Alliance represents aspects of the best of health care delivery in the United States; the integration of the highest medical science, technology and our medical community through the organization and integration of systems of care leading to seamless translation of evidence based medicine into clinical practice.

Ralph Brindis, MD, MACC.