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Dashboard Tool Helps Avert Big Errors at VISN 21

ORLANDO, FLA.—When a pharmacist-led committee at the Veterans Affairs Sierra Pacific Network (VISN 21) sat down to create an electronic health record (EHR)-based clinical Medication Safety Dashboard (MSD), they faced the unenviable task of sifting through roughly 400 EHR metrics and choosing the fraction they believed would lead to the widest improvements in safe medication use if targeted. As evidenced by the 113,000 patients spared potentially life-threatening drug-related complications during a three-year dashboard pilot period, their work has paid off.

The program's success demonstrates that, although the sheer volume of "big data" can be overwhelming, managing and exploiting it can lead to striking outcomes, said William Owad, who presented the team with an American Society of Health-Systems Pharmacists (ASHP) Foundation Award for Excellence in Medication Use Safety at the 2013 ASHP

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Med Rec Efforts Can Be Difference In Patient Safety

ALBUQUERQUE, N.M.—Three studies presented at the American College of Clinical Pharmacy (ACCP) annual meeting offer fresh evidence that enlisting pharmacists in the medication reconciliation process can help patients avoid serious adverse drug events that prolong costly hospitalizations. In some cases, the interventions were deemed potentially life-saving.

One of the studies, a prospective,

see **MED REC**, page 14

Project IMPACT Extends Reach to High-Risk Patients

Previous research initiatives such as the Asheville Project in North Carolina and the American Pharmacists Association (APhA) Foundation's Project IMPACT studies have shown that when pharmacists assume a key role in empowering patients to manage their diabetes and other chronic conditions, patients' health improves and the cost of care decreases.

But does the same pharmacist-driven model work for a large and far more challenging population, one that includes a high number of individuals who are mostly poor, uninsured and sometimes homeless? That was the question the APhA Foundation set out to explore three years ago, when it launched "Project IMPACT: Diabetes."

It turned out that the answer was yes. Preliminary results released by the foundation showed that a group of more than 1,500 high-risk patients, many of them on

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A student pharmacist from Mountain States Health Alliance consults with a patient at Dispensary of Hope Pharmacy, a site of the Project IMPACT: Diabetes initiative.

In a Crystal Ball for Pharmacy, Profound Change Is a Constant

ORLANDO, FLA.—A survey of pharmacy stakeholders from across the country suggests that health-system pharmacists should brace themselves for mounting financial pressures and expanding clinical responsibilities, among other big changes. The five-year *Pharmacy Forecast*, presented at the American Society of Health-System Pharmacists (ASHP) 2013 Midyear Clinical Meeting, also indicated that experts believe that hospital pharmacies will need to focus more on outpatient care and demonstrate their department's influence on the hospital's success.

David A. Zilz, MS, a clinical professor emeritus and former director of pharmacy at the University of Wisconsin Hospital and Clinics in Iola, said health-system pharmacy leaders need to develop and implement a strategic plan now more than ever. "Hospitals are being integrated into multihospital systems, and the model of care is changing from a siloed acute and community care approach to a longitudinal, continuum-of-care model," said Mr. Zilz, who moderated the ASHP session where the *Pharmacy*

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New Product

FDA Approves **Sovaldi** for Hepatitis C.

See page 23.



DIABETES

IMPACT

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multiple medications for diabetes and other chronic conditions, was able to achieve a significant 0.7-point average reduction in hemoglobin (Hb) A_{1c} (from 9.0% to 8.3%) during the first six months of intensive management by health care teams that included pharmacists as leading players (Table). Other indicators of cardiovascular health also improved significantly, including low-density lipoprotein (LDL) cholesterol (from 99.5 to 92.2 mg/dL), systolic blood pressure (from 131.8 to 129.9 mm Hg) and body mass index (from 35.1 to 34.9 kg/m²).

“Even in this very difficult population, we were able to achieve results that were similar to those that we saw in earlier studies,” Benjamin M. Bluml, RPh, the senior vice president for research and innovation at the APhA Foundation, said in an interview with *Pharmacy Practice News*.

The 25 organizations that took part in the project represented a wide range of practices, including university pharmacy school programs, community and supermarket pharmacies, employer worksites, federally qualified health centers and physician-run clinics. Mr. Bluml said they were selected from among nearly 300 organizations that had expressed initial interest because they met stringent criteria, including location in areas with a high burden of diabetes and the resources to carry out the research initiative effectively. They also had to “put a continuous quality improvement program on the ground,” he said, and “use our patient self-management credential. And they had to report a minimum data set to us quarterly.”

Although the foundation set rigorous

standards for participation, it sought to avoid a cookie-cutter approach to care. “We encouraged each community to take an inventory of resources available in their communities and sort out the best way to create a team-based approach to delivering patient-centered care,” Mr. Bluml said.

Mindy Smith, RPh, the executive director of the APhA Foundation, told *Pharmacy Practice News* that the program’s success could be a lesson for insurers and health care organizations nationally, as they gear up for the huge expansion in care delivery under the Affordable Care Act. “We’ve now shown what pharmacists can do in the underserved and underinsured” populations, she said. “It’s a great story to be able to say, ‘pharmacists can be part of the solution to really help meet the needs of health equity and access to care within those environments.’”

Patients came to know pharmacists and other team members extremely well during clinic visits, and vice versa. That closeness was crucial to the patients’ progress, according to Ms. Smith, who said when patients were later asked to name the factors that had made a difference in their progress, many replied, “My pharmacist cares for me.” It helped that there were no time limits on clinic sessions. Pharmacists could take as much time as needed to engage patients in taking charge of their own health.

That extra time was needed because it could be very difficult to reach some patients, said Joy Waddell, PharmD, the pharmacist in charge of the Mountain State Health Alliance’s Northeast Tennessee Dispensary of Hope, in Johnson City. “For the most part, our patients are underserved, underprivileged and indigent,” she said. “At one time, 50% of our patients were homeless. Even after you bond with them, it’s very difficult to



Courtney Davis, PharmD, of the University of Mississippi, counsels a patient enrolled in the Project IMPACT: Diabetes study.



At The Ohio State University College of Pharmacy, Stuart J. Beatty, PharmD, BCPS, CDE, works as part of a multidisciplinary team that delivers diabetes care to uninsured or underinsured patients.

keep them here.” Tennessee is one of a handful of states where diabetes prevalence exceeds 10%.

Still, Dr. Waddell said she could think of as many as 10 patients, “right off the top of my head, where we really made a difference.” One such patient,

she said, had lost his job and was living “off a couch” in a relative’s home and trying to go back to school to change careers. “He’ll tell you that we changed his life,” she said. Recent tests showed that his HbA_{1c}, blood pressure and cholesterol levels “had dropped dramatically,” she said. “I got so excited, I did a little happy dance.”

Despite the successes, Dr. Waddell said she is often frustrated because “we can’t change generations of living, education, or eating and exercise habits” easily. “This is not a quick fix; it’s a marathon that we have to keep up because it takes years and years, and maybe a generation, to make a difference for these folks.”

At OSU, More Frequent Visits Spur Results

The Project IMPACT rules required enrolled patients to visit clinics at least three times during the study year. But for patients with especially high HbA_{1c} levels, an assortment of other comorbidities and a tendency to not adhere to medication regimens, three visits a year were hardly enough. At The Ohio State University (OSU) College of Pharmacy diabetes clinic, for example, patients

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—Joy Waddell, PharmD

Table. Project IMPACT: Diabetes Interim Results

Clinical Indicators	Patients, n	Mean Initial Value	Mean Interim Value	Mean Change
HbA _{1c} (ADA goal <7.0%)	1,580	9.0%	8.3%	-0.7% ^a
LDL cholesterol level (NCEP goal <100 mg/dL)	966	99.5 mg/dL	92.2 mg/dL	-7.3 mg/dL ^a
Systolic blood pressure (JNC VII goal <130 mm Hg)	1,702	131.8 mm Hg	129.9 mm Hg	-1.9 mm Hg ^a
BMI (WHO normal 18.5-24.9 kg/m ²)	1,699	35.1 kg/m ²	34.9 kg/m ²	-0.2 kg/m ^{2a}

ADA, American Diabetes Association; BMI, body mass index; HbA_{1c}, glycosylated hemoglobin; JNC VII, The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report; LDL, low-density lipoprotein; NCEP, National Cholesterol Education Program; WHO, World Health Organization

^a Statistically significant change.

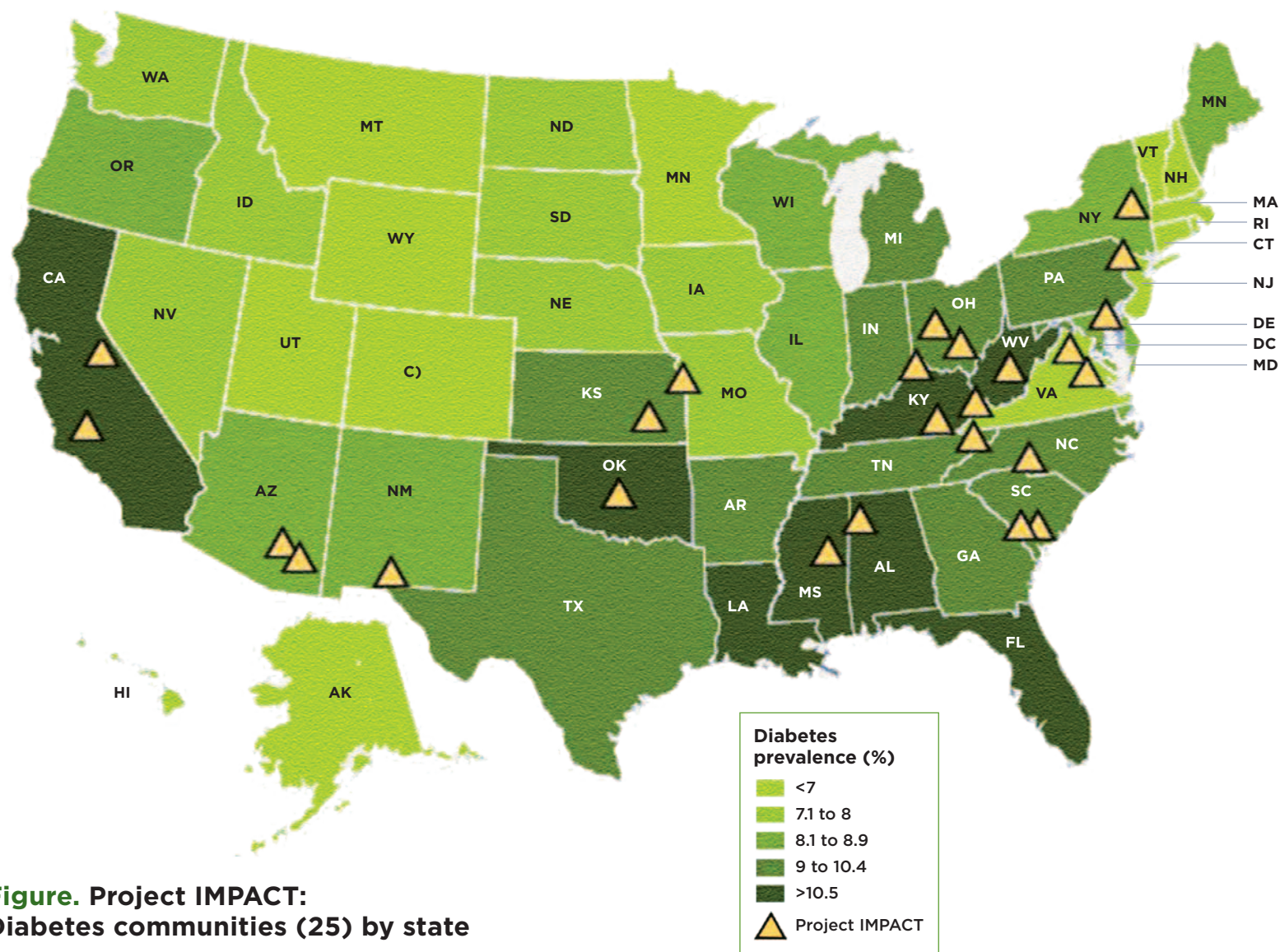


Figure. Project IMPACT: Diabetes communities (25) by state

were scheduled to come in anywhere from every two weeks to every three months, depending on the severity of their disease and the number of changes needed in treatment regimens.

Stuart Beatty, PharmD, BCPS, CDE, an assistant professor of clinical pharmacy at the OSU College of Pharmacy, in Columbus, said the typical patients referred to the clinic were “very poorly controlled,” with an average baseline HbA_{1c} of nearly 10% and some as high as 15%. “They have multiple chronic illnesses and are taking lots of other medications,” he said. One reason patients are sent to the clinic, he added, is that “there is too much going on for their primary care physicians to take care of in a standard office visit.”

Because of that complexity, “we have a team-based approach that is focused on diabetes,” Dr. Beatty said. “I think the patients appreciate that. We really want them to be part of the process, so there is a lot of education involved, and we do a lot of questioning to let them tell us what their barriers are, so we can help them overcome that.”

With an overall HbA_{1c} reduction of nearly 1.5%, the clinic’s approach has worked for most patients. Moreover, the results are not just an impressive statistic: A 1% reduction in HbA_{1c} is associated with an approximately 40% reduction in the incidence of microvascular

complications, which underscores the clinically meaningful effect of the interventions (*Diabetes* 1995;44:968-983).

Continuity of Care

Pharmacists also made sure that patients stayed on course between regular clinic appointments by staying in touch via telephone, email or through their primary care providers. At the Diabetes Care Group in Jackson, Miss., which partners with pharmacists from the University of Mississippi School of Pharmacy, patients were asked to record their glucose levels in a paper log and to bring them in or fax them between scheduled visits. Courtney Davis, PharmD, a clinical assistant professor at the University of Mississippi School of Pharmacy, said that with the paper logs she could track patient daily glucose level trends over time and suggest between-visit medication adjustments to the physicians in the group.

Mississippi is another state that has a major diabetes burden, with a prevalence greater than 11%. Dr. Davis said Diabetes Care Group patients enrolled in the Project IMPACT study had an average baseline HbA_{1c} level of 9.2%. “We achieved a 1.2% reduction within a year,” she said. “Quite a number [of patients] met their goal [<7.0%]. The problem is that A_{1c} tends to fluctuate over time. It’s just a constant struggle trying to remo-

tivate them because diabetes is lifelong and constantly changing.”

But she added, “It’s really rewarding to see those who have come so far.”

Diabetes care teams have tried to stay close with patients’ progress after the study year to make sure, as Dr. Beatty said, “that they don’t fall off the deep end with poorly controlled diabetes.”

Looking at the wide range of prac-

‘We’re really hopeful that these results can be fundamentally transformative in the health care delivery system.’

—Benjamin M. Bluml, RPh

tices involved in the project, Dr. Beatty said it was “clear that it doesn’t matter what setting patients are seen in and it doesn’t matter what the demographics are. If a pharmacist is involved in the health care of a patient with diabetes, they will have better outcomes.”

A Model for Other Programs

The success of the Asheville Project and Project IMPACT has helped spawn other similar programs. Barry Bunting, PharmD, who coordinated the Asheville Project in the late 1990s, when he was the clinical manager of community pharmacy practices for Mission St. Joseph’s Health Systems, in Asheville, said the impact of the proj-

ect has been “much larger” than he ever would have imagined in the early years. “To my knowledge, there are similar programs now in more than 30 states. In fact, I just got an email from a colleague who is working on implementing an Asheville-type model project in India,” said Dr. Bunting, who is now the vice president of clinical services at American Health Care, a Rocklin, Calif.-based

provider of pharmacy benefit management services.

As the Project IMPACT: Diabetes sites continue to be successful throughout the country (Figure), the APhA Foundation is looking ahead to other, potentially larger Project IMPACT programs. “We’re really hopeful that these results can be fundamentally transformative in the health care delivery system,” Mr. Bluml said. “And with support from our current sponsor [Bristol-Myers Squibb Foundation] and the potential support from others, we’ll be in a position to really translate that into practices all across the country.”

—Bruce Buckley