



Mediglyphs™: A Visual Health Literacy System

Mediglyphs™ is an inter-department collaboration between the Nationwide Children's Hospital Outpatient Pharmacy and Nationwide Children's Hospital Section of Ambulatory Pediatrics. This system focuses on the urgent need for the pharmacy and healthcare community to address how low literacy and/or lack of language skills directly affect the quality of patient care.

Nationwide Children's Hospital's Mediglyphs™ System addresses health literacy disparities in the healthcare system. **The mission of this unique pediatric health literacy system is to use pediatric specific images that increase patient/caregiver adherence to prescription instructions, thereby reducing medication errors.**

Our pictogram library is an innovative web-based educational tool made up of approximately 300 images illustrating medication-specific instructions. This unique system allows health care providers to:

1. Print pre-made fast path medication sheets from a drop down menu.
2. Create custom patient education material for medication.
3. Print oral syringe education sheet.

Providers utilize these education materials in conjunction with verbal instructions and teaching. This allows providers to ask open-ended questions to ensure understanding, and utilize teaching strategies to increase medication adherence.

Qualitative research conducted with asthma images indicates:

- The use of images is an effective means of communicating asthma information.
- Medication specific images are more effective than standard asthma education materials used to communicate information.
- Research participants were satisfied with the use of images when receiving asthma therapy information.

The Outpatient pharmacy at Nationwide Children's Hospital dispenses over 200 prescriptions daily. In 2009, a total of 77,752 prescriptions were dispensed, and of those, approximately 10% were asthma medications. One indicator used to assess the lack of health literacy skills here in central Ohio is the number of "therapeutic error" calls logged by the Central Ohio Poison Center (COPC). Therapeutic error is defined as an unintentional deviation from a proper therapeutic regimen that results in the wrong dose, incorrect route of administration, administration to the wrong person, or administration of the wrong substance. In 2009, the COPC received 2,035 therapeutic error calls for children ages 0 to 19 years. This number represents the voluntary calls made to COPC, it is estimated that twice as many therapeutic errors go unreported.

Central Ohio has seen a dramatic demographic change in the past decade. Support from the Cardinal Health Foundation has allowed us to create a Mediglyphs™ web-page. This page is intended to address clear health challenges in pediatric health care due to the increase in diverse cultures, languages and poor health literacy skills. Through the Mediglyphs™ page, providers will be able:

- Access current information on the Mediglyphs™ System.
- Request a CD containing our current asthma medication material.
- Link with professional development opportunities.
- Link with educational resources to help providers improve clear health communication within their practice.

We believe the Mediglyphs™ System has far reaching potential and will lead the way for change within pediatric pharmaceutical and healthcare delivery systems. We plan to develop comprehensive pediatric image libraries for a number of disease states. Our leadership team is dedicated to building upon our existing Mediglyphs™ System and continues to assess viable opportunities. Our leadership team includes:

- Karl Kappeler, Director Pharmacy Services
- Olivia Thomas, MD, Chief Ambulatory Pediatrics
- Claudia Barrett, Health Literacy Coordinator
- Cheryl Laubacher, Ambulatory Clinical Pharmacist
- Chris Kroskie, Supervisor Outpatient Pharmacy

To learn more about Mediglyphs™: A Visual Health Literacy System, please visit:
www.NationwideChildrens.org/Mediglyphs