

# NEONATOLOGY TODAY

News and Information for BC/BE Neonatologists and Perinatologists

Volume 7 / Issue 1

January 2012

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## NEONATOLOGY TODAY

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[www.NeonatologyToday.net](http://www.NeonatologyToday.net)

Neonatology Today (NT) is a monthly newsletter for Neonatologists and Perinatologists that provides timely news and information regarding the care of newborns and the diagnosis and treatment of premature and/or sick infants.

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## Developing a Congenital Heart Surgery Program in Ho Chi Minh City, Vietnam: A Five Year Retrospective and Lessons Learned

By Casey B. Culbertson, MD; Nguyen Kinh Bang, MD; Vu Minh Phuc, MD

### Introduction

Efforts to develop sustainable congenital heart disease surgical programs in developing (3rd World) countries have been previously described in the literature.

In 2006, the Socialist Republic of Vietnam determined that the Children's Hospital (Nhi Dong #1) in Ho Chi Minh City (HCMC), formerly known as Saigon, should develop a Congenital Heart Disease (CHD) surgical program with the goal of beginning surgical repair of the most common forms of CHD in 2007. Nhi Dong #1 (ND #1) is a 1200 bed Children's Hospital serving primarily the 31 surrounding provinces of HCMC with a population of approximately 40 million. The Cardiology Ward has 55 beds with 70-80 admitted patients on a typical day. The cardiology and cardiovascular (CV) surgical "team" at ND #1 consists of 3 CV surgeons, 4 CV anesthesiologists, 9 CVICU doctors and 14 cardiologists (6 of which would be considered "attendings" in the American medical system; the rest are "trainees"). There is no formal "fellowship" training for Pediatric Cardiology in Vietnam.

There was a waiting list of approximately 6000 children who needed CHD surgery when this program was conceived in 2006. The cost of surgical repair of CHD for Vietnamese chil-

dren is between \$2500-3000 USD. At the program's inception, children less than 6 years of age had 100% of the surgical cost paid for by the government. In 2009, the government of Vietnam bought all the insurance programs being offered to Vietnamese families. Currently, a child under 6 years of age with CHD has 80% of the surgical costs paid for by insurance (i.e. the government) with the family being responsible for the remaining 20%. For a child over 6 years of age with CHD, if the family bought insurance, the insurance pays for 60% of the surgical charges and the family is responsible for the other 40%. If the family has no insurance, they are responsible for 100% of the surgical charges. As many Vietnamese families make less than \$10 USD a month; non-government organizations (NGO's) such as the "East Meets West"

*"Elevated sound levels in neonatal intensive care units (NICUs) may contribute to undesirable effects and influence the vital signs stability in moderately sick newborn infants."*

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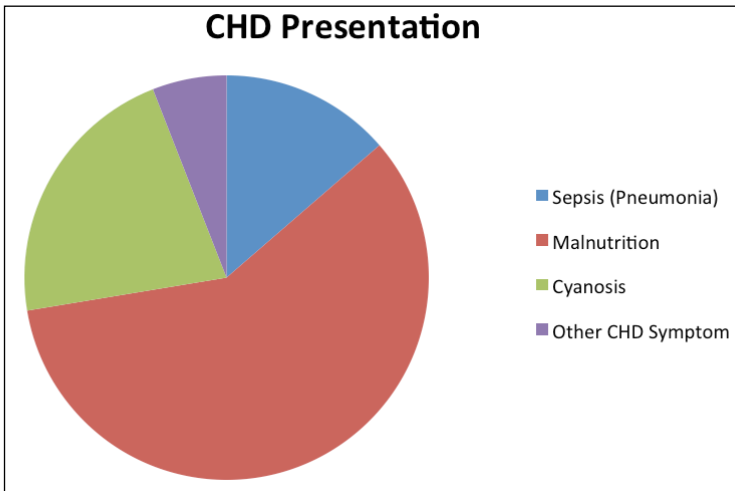


Chart I

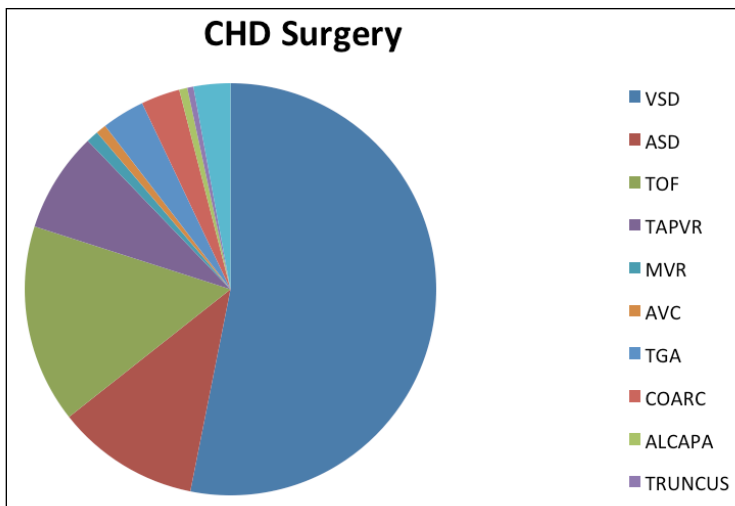


Chart II

Foundation and other charitable organizations have been instrumental in helping Vietnamese families obtain CHD surgery.

### Background

Prior to starting this program, several on-site meetings were held between the ND#1 cardiologists, CV surgeons, the leadership of ND#1 and their "Western" colleagues. Several *tenets* were agreed upon and developed from these meetings and have been rigidly held to by all participants.

**Accurate diagnosis of patients with CHD.** This required both financial and intellectual investment from the Vietnamese doctors and their "Western" colleagues. "Up-to-date" echocardiography equipment (HP/Phillips Sonos 5500 ultrasound machines) was obtained from Assist International. More formal echocardiography training was done either during on-site visits (primarily by teams from the United States and Singapore) or by sending the ND#1 cardiologists abroad (primarily to Malaysia) as supported by Children's Heartlink International. This extensive echocardiography training was felt to be a priority prior to starting the surgical program. Since early 2007, every child presenting for cardiac evaluation at ND #1 receives a complete history and physical exam, ECG and when indicated, a full echocardiogram (as defined by ASC standards) performed by a ND #1 cardiologist.

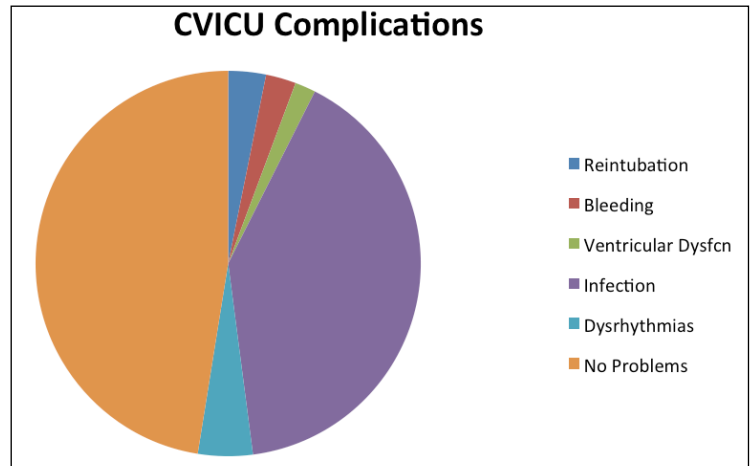


Chart III

**Best hemodynamic repair possible in the operating room.** A pediatric trans-esophageal echo (TEE) probe is used during every cardiac bypass (CPB) case done at ND #1. Before separating from CPB, every patient is evaluated by a ND #1 cardiologist with a post operative TEE to confirm the adequacy of the repair and that there are no significant residual lesions. Any concerns about residual lesions found results in an immediate discussion in the OR with the CV surgeon and (usually) results in a 2nd CPB "run" to correct the residual lesion.

**Aggressive post-operative care.** Multiple evidence-based protocols were developed for the cardiovascular ICU (CVICU) for the management of "straightforward" lesions (such as atrial septal defects, ventricular septal defects, atrioventricular canal defects, etc). These are subject daily to clinical evaluation or re-evaluation of each patient by the CVICU doctors. These protocols include management of inotropic support, ventilator support, fluid and electrolyte management etc. Special emphasis has been placed on concerns about post-operative Nosocomial infections in the CVICU and the Cardiology Ward. ND #1 actively participates in and contributes CHD surgical data to the "International Quality Improvement Collaborative" (IQIC-for CHD Surgery in Developing Countries) which was developed and is maintained at Boston Children's Hospital and from which ND#1 receives quarterly progress reports.

### Other Considerations

It must be noted that prostaglandin E1 (PGE1) is not available in Vietnam. Therefore, patients with ductal-dependent lesions often die after presentation to provincial hospitals that refer patients to ND #1, or arrive at ND #1 in extremis, even if significant CHD is recognized outside of ND #1. Unfortunately, this 'skews' the data presented in this article about PDA-dependent lesions. Since 2010, an effort has been made to place percutaneous stents in the PDA of ductal-dependent lesions of patients presenting to ND #1, and if reasonable, to allow for further evaluation and surgical treatment of these patients if possible.

Given the financial constraints of the Vietnamese medical system and Vietnamese families, it was decided at the inception of this program that single ventricle patients would only be offered palliative care or, if reasonable, a palliative surgery (such as BT shunts). Further, at the inception of the program, it was also decided that no Vietnamese patient admitted to ND #1 for evaluation would be sent abroad for surgery unless the family had both that wish and the financial means to support their child. To-date, every child presenting to ND #1 with CHD for surgery has been operated on at ND #1.

Two teams from abroad (the United States and Singapore) have made a significant investment in this program from its inception. These teams try to alternate visits to ND#1 every 6 months, if possible, to support the program. The Singaporean CV surgeon also routinely makes visits (usually monthly) for a day to assist the ND #1 CV surgeons on complex CHD patients. These two teams have also made a significant effort to address and concentrate teaching on specific cardiac lesions during each visit (such as atrioventricular canal, Tetralogy of Fallot, and transposition physiology—primarily d-TGA) in order to maximize effective learning.

#### Presentation

Children presenting to ND#1 with CHD have a high incidence of pneumonia (13.6%), malnutrition (58.6%) based on body weight for age and general appearance on presentation, and cyanosis (21.7%), primarily in children presenting with d-TGA, TOF and TAPVR. This data is summarized in Chart I.

#### Overall Results

The CV surgical database maintained at ND#1 was retrospectively analyzed from inception of the surgical program (June 30, 2007) until July 31, 2011. Six-hundred and thirty-three children received operations during that time period with an overall mortality of 0.94% (6/633). This mortality data represents all CHD surgical deaths < 30 days post surgery and include: 1 intra operative death and 5 CVICU deaths. Median age and median weight of this group was 28 months (range <1 week to 165 months) and 9.2Kg (range 2.6 Kg to 47 Kg) respectively. There has been a definite trend in the last 2 years to operate on both younger and smaller patients with more complex lesions (d-TGA, total anomalous pulmonary venous return, etc.). One hundred percent of CHD surgery patients received complete pre-operative transthoracic (TTE) echocardiograms, while only 5.9% of CHD patients received a cardiac catheterization prior to surgery.

The major types of CHD operations done at ND #1 are listed in Chart II.

As seen in Chart II, ND #1 is presented with a large spectrum of CHD for surgical repair. The majority of surgeries performed



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*Drs. Trang, Minh, Thien and Phuc in the CVICU*



*Post operative VSD patient.*



*The "Emergency Room" on the Cardiology Ward at Nhi Dong #1.*

at ND #1 are complete repairs on CPB (98%), with only 2% of the cardiac surgeries being palliative repairs (primarily modified BT shunts) or non-CPB surgeries (i.e. PDA ligations). The majority of CHD surgical repairs performed at ND #1 in this report were VSD's (53.1%), ASD's (11.24%) and TOFs (15.3%). Since the initiation of cardiac catheterization interventions at ND #1 in 11/2009, the number of surgical PDA ligations and ASD closures has dropped dramatically. To date, the cardiac catheterization laboratory at ND #1 has performed over 1000 cases, all primarily interventional.

The CV surgeons at ND#1 have been well supported by "outside" CV surgeons and the ND#1 CV surgeons are "scrubbed in" on 100% of all CV surgical cases done when there is a visiting CV surgeon. The visiting CV surgeon from the United States has assisted with 2.6% of all surgeries; the visiting CV surgeon from Singapore has assisted with 6.3% of all surgeries, and a senior CV surgeon from a large heart center in HCMC has assisted with 6.7% of all CHD surgeries performed at ND#1. The remaining 84.4% of CHD surgeries have all been performed by the 3 ND #1 CV surgeons and they divide the cardiac surgeries performed equally so no one CV surgeon has more "experience" than the other. Analysis of mortality shows no one ND #1 CV surgeon as having poorer surgical outcomes than his or her colleagues.

### ICU Outcomes

The CVICU at ND #1 is a 6-bed unit with 3 primarily more senior CVICU doctors and 6 "junior" doctors who also cover the CVICU. Several of these doctors have been trained in cardiac critical care outside of Vietnam (primarily in Malaysia) and a significant effort has been made by visiting teams to further train the CVICU doctors on site. Both foreign training and on-site training have added to the overall success of the CVICU. The ND #1 cardiologists are also involved and round daily in the CVICU. All the CVICU doctors have been trained to perform basic TTE echo studies for urgent hemodynamic evaluations in the CVICU.

Of note, a significant effort has also been made in the training of the CVICU nursing staff by visiting teams (which have included critical care nurses). A critical care nurse from Singapore makes frequent visits to ND #1 for training and several of the ND#1 CVICU nurses have also been able to go to Singapore for further training. This CVICU nursing training component (both on-site and abroad) has made a significant contribution to the overall success of the CHD program at ND #1.

Chart III shows the post-operative complications reported in the CVICU.

The majority of the mortality we report for the ND#1 CV surgical program has occurred in the CVICU. Of the 5 CVICU deaths, 3 patients had d-TGA status post arterial switch operation (1 thought to be due to an anaphylactic protamine reaction; 1 due to ventricular tachycardia, and 1 with LV dysfunction possibly secondary to a coronary injury). The final 2 deaths were patients status post complete- TOF repairs (one due to bleeding and one due to uncontrolled junctional ectopic tachycardia and RV dysfunction).

Database review of the CVICU complications excluding mortality demonstrates low rates of re-intubation (3.2%), dysrhythmias (4.7%) and post-operative bleeding (2.6%). However, review of the ND #1 database also demonstrates a post-operative CVICU infection rate reported at 41.1%, all primarily listed as "pneumonia." In one author's experience (CBC) working with the CVICU doctors, a post-operative temperature of 38°C was considered a post-operative fever and / or an "abnormal" chest X-ray (even with no positive blood or sputum cultures and no elevation in the white blood count) often resulting in initiation of empiric antibiot-

**“There is an additional (essentially unspoken) problem which also threatens the expansion of CHD surgical care in Vietnam. Physicians who come from abroad to work with the Vietnamese cardiologists and CV surgeons know the problem as ‘brain drain.’”**

ics (usually Rocephin® and often Vancomycin) and a diagnosis of “pneumonia.” Thus, most likely the 41.1% infection rate reported in their database is an exaggeration of the true incidence of infection in the CVICU.

Further, when reviewing the ND #1 database for blood, urine or sputum culture with positive infections or clear evidence of post-surgical wound infections (as rigidly required for the IQIC reports vs. the reported “pneumonias”), the incidence of post-operative infections appears to be quite low. At the last ND #1 visit, the criteria for diagnosis of post-operative infections, appropriate diagnostic testing and appropriate use of antibiotics was completely reviewed by the visiting ICU cardiologist (CBC) with the CVICU physicians.

### Summary

The CHD Open-Heart Surgical Program at ND#1 has evolved over the past 5 years into an outstanding center based on the hard work of the ND #1 cardiology and CV surgical “team” and their “Western” counterparts. A surgical operative mortality rate of essentially 1% is certainly envious, even for their “Western” colleagues who support the program. Indeed, other South East Asian countries (such as Cambodia) now send their CV surgery teams to learn from the CV surgery program at ND #1. Upon reflection, the three ‘tenets’ of this program developed in 2006 (accurate ECHO diagnosis, best intra-operative hemodynamic

repair possible, and aggressive postoperative care) have laid the foundation for a successful CHD surgical program at ND #1.

### Challenges

Many challenges remain to continue to expand the CHD surgical program at ND #1. The government clearly wants this program to grow and has made plans to build a separate (300+ bed) pediatric cardiac hospital dedicated to patients with CHD. Indeed, they see ND#1 as the leader in pediatric cardiology and CHD surgery for HCMC and the surrounding provinces. However, surgical capacity, manpower, and CVICU bed space currently remain significant “roadblocks” for the ND #1 CHD “team” and the delivery of proper evaluations and treatment for thousands of children with CHD in HCMC and the surrounding provinces. Infections (both pre- and post-operative) and pre-operative malnutrition remain as significant challenges that threaten the surgical outcomes for children in Vietnam with CHD.

There is an additional (essentially unspoken) problem which also threatens the expansion of CHD surgical care in Vietnam. Physicians who come from abroad to work with the Vietnamese cardiologists and CV surgeons know the problem as “brain drain.” Most ND #1 cardiologists and CV surgeons make less than \$70 USD a month which means that many are “literally” running out the door at 4 p.m. (when not on call) to staff their private clinics for which they can make 2-3 times the income of that at ND #1. Most of the ND #1 physicians are young and have young families which they need to support. The pressure to go out into “private” practice and make much more money than at ND #1 is enormous. This is a problem that the government of Vietnam needs to address in order to expand congenital heart surgery in HCMC. It should be noted that none of the ND #1 physicians have left the CHD program to pursue “easier” or more financially rewarding positions. They have taken “ownership” of the ND #1 CHD cardiac program, and they seem happy to work harder at night when not on call to support their families than to abandon “their” program which is providing superior cardiac care to the children of Vietnam with CHD.

*Special thanks to Jay Yeh, MD for reviewing this manuscript.*

### References

1. Kumar, R Krishna, Congenital Heart Disease in the Developing World. Congenital Cardiology Today. Vol.3, Issue 4 2005.
2. Zheleva, Bistra, Linked by a Common Purpose: Global Efforts for Improving Pediatric Heart Health: A Report by Children’s Heartlink. Congenital Cardiology Today. Vol. 5, Issue 7 2007.
3. East Meets West Foundation [www.eastmeetswest.org](http://www.eastmeetswest.org).
4. Assist International [www.assistinternational.org](http://www.assistinternational.org).
5. Children’s Heartlink [www.childrensheartlink.org](http://www.childrensheartlink.org).

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# Medical News, Products and Information

## Use of Antenatal Corticosteroids for Very Preterm Births Associated with Reduced Risk of Infant Death, Neurodevelopmental Impairment

Antenatal (before birth) corticosteroid therapy for mothers of infants born at 23 to 25 weeks' gestation was associated with a lower rate of infant death or neurodevelopmental impairment at 18 to 22 months of age, according to a study in the December 7, 2011 issue of *JAMA*.

"Current guidelines, initially published in 1995, recommend antenatal corticosteroids for mothers with preterm labor from 24 to 34 weeks' gestational age, but not before 24 weeks due to lack of data. However, many infants born before 24 weeks' gestation are provided intensive care," according to background information in the article.

Waldemar A. Carlo, MD, of the University of Alabama at Birmingham, and colleagues conducted a study to determine if antenatal corticosteroid exposure in very preterm infants was associated with improvement in outcomes that included death or childhood neurodevelopmental impairment at 18 to 22 months. The study included data on infants with a birth weight between 401 grams (14.1 ounces) and 1,000 grams (35.3 ounces) (n = 10,541) born at 22 to 25 weeks' gestation between January 1993 and December 2009 at 23 academic perinatal centers in the United States. Of these infants, 7,808 (74.1%) were born to mothers who received antenatal corticosteroids. Of the 5,691 infants born between 1993 and 2008 who survived to 18 to 22 months, 4,924 (86.5%) had neurodevelopmental assessments.

The researchers found that death or neurodevelopmental impairment was less frequent in those infants who had been exposed to antenatal corticosteroids and were born at 23 weeks' gestation (83.4% vs. 90.5% without exposure); at 24 weeks' gestation (68.4% vs. 80.3%); and at 25 weeks' gestation (52.7% with exposure to antenatal corticosteroids vs. 67.9% without exposure); but not in those born at 22 weeks' gestation (90.2% vs. 93.1%).

"If the mothers had received antenatal corticosteroids, the following events occurred significantly less in infants born at 23, 24, and 25 weeks' gestation: death by 18 to 22 months; hospital death; death, intraventricular hemorrhage, or periventricular leukomalacia [a type of brain injury]; and death or necrotizing enterocolitis [a condition in which part of the tissue in the intestines is destroyed]. For infants born at 22 weeks' gestation, the only outcome that occurred significantly less was death or necrotizing enterocolitis (73.5% with exposure to antenatal corticosteroids vs. 84.5% without exposure)," the authors write.

However, the authors caution that "even though intact survival doubled with the administration of antenatal steroids in the entire cohort, it remained relatively low (36%)."

"Despite their potential to improve outcomes, the administration of antenatal corticosteroids is not increasing at gestational ages around the limits of viability and remains substantially lower than at later gestational ages. Controlled trials could be performed to precisely determine the benefits of antenatal corticosteroids when administered this early but such trials will be difficult to perform. Initiation of antenatal corticosteroids may be considered starting at 23 weeks' gestation and later if the infant will be given intensive care because this therapy is associated with reduced mortality and morbidity," the researchers conclude.

## Philips Survey Reports Nearly 75% of Women Want to Breastfeed as Long as Possible

New and expecting parents in the United States are doing all they can to ensure a healthy future for their children - including breastfeeding their babies for as long as they are able, according to the Philips Mother & Child Care Index. This newly released special report from Philips Center for Health and Well-being was conducted with mothers and fathers across the United States, focusing on breastfeeding practices, prenatal care and the overall health

and well-being of parents, including factors such as stress and sleep.

The survey highlighted the fact that women are enthusiastic about breastfeeding. Ninety-five percent of women reported having at least attempted to breastfeed their babies, with 35% continuing for between four and six months, and another 52% breastfeeding for seven to twelve months.

And parents would like to breastfeed even more - 72% expressed a desire to continue breastfeeding as long as possible. The survey cited pain and lack of milk supply as the two top reasons women give-up on breastfeeding, and a return to the workplace also contributed to their decision to stop breastfeeding.

"The findings show that parents are placing a very high value on breastfeeding," said Katy Hartley, Director for the Philips Center for Health and Well-being. "There is an opportunity to help parents who want to breastfeed their children for longer than six months, but lack the resources to help cope with problems that may arise."

Pain was usually a factor that caused women to stop breastfeeding within the first three months, and lack of supply typically caused women to stop between three and seven months. Sixty-seven percent of American women cited a lack of milk supply as a reason, compared with 40% globally. Seventy-three percent of American women completed a breastfeeding course, compared with 41% of mothers globally.

"Parents' commitment to breastfeeding should be bolstered by a recent IRS ruling that expenses paid for breast pumps are deductible medical expenses under IRS Section 213(d)," said Ron Tiktin, Marketing Director, Philips AVENT. "As a result, expenses for these items may now be reimbursed by Flexible Spending Arrangements, Health Reimbursement Arrangements and Health Savings Accounts. Given the numerous health benefits associated with breastfeeding, Philips AVENT is committed to providing parents the means to



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continue breastfeeding for as long as possible with our breast pumps.”

Two thirds of parents consider themselves stressed, the survey reported. Primary stressors – the economy and parents’ ability to pay bills – are reflective of the country’s uncertain economic landscape. Mothers report feeling more stress than fathers, and this stress level is exacerbated as the number of children increase.

Another theme the survey highlighted was parents’ focus on excellent prenatal care, with 96% of women reported receiving regular sonograms, 12-week scans and 20-week scans as part of their prenatal regimen. Additionally, 89% of fathers and 64% of mothers consulted with their general practitioners for health advice during pregnancy.

These results are part of a global survey conducted by the Philips Center for Health and Well-being among men and women, ages 18 – 40, with children ages zero to five, or who are expecting a child. The report focused on the responses of a representative sample of almost 5,600 moms in South Africa, Egypt, UK, US, Brazil, China and India regarding their experience breastfeeding.

For more information, please visit the Philips Center for Health and Well-being at [www.philips-thecenter.org](http://www.philips-thecenter.org).

### **Autism Risk Linked to Prenatal Drug Exposure**

Danish Investigators presented their findings from their population-based study at the American Epilepsy Society’s 65th Annual Meeting. They found there is an increased risk of autism spectrum disorder and childhood autism in children born of mothers who are exposed to the anticonvulsant valproate during pregnancy (Platform B.09).

The relative risk of autism spectrum disorder in children of mothers on valproate monotherapy was found to be 2.6 times that of children not exposed to antiepileptic medication in utero. The risk of child-

hood autism was almost five-fold increased compared to children without prenatal exposure to valproate.

Lead investigator, Dr. Jakob Christensen of Aarhus University Hospital, Denmark, cautions that while there appears to be a relationship between valproate and autism, women of childbearing age should not stop taking the medication without consulting their doctors.

“Stopping any anticonvulsant medication poses a serious danger,” Dr. Christensen says. “Women taking valproate who are contemplating pregnancy should consult with their doctors about the possibility of transitioning to another drug, or reducing the dosage of their present medication when that isn’t possible.”

To arrive at their estimates, Christensen and his team searched data from several national registries. They identified children born between 1996 and 2006 and mothers with epilepsy who were taking valproate 30 days prior to the day of conception to the day of birth. The researchers then identified the children born during this period who were diagnosed with autism spectrum disorder and specifically assessed the subgroup diagnosed with childhood autism.

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### **Nearly Half of Physician Practices Do Not Meet National Standards for "Medical Homes"**

Many Americans do not have access to a "medical home"- a physician practice that is able to manage ongoing care for patients and coordinate care among specialists and other health care facilities, according to a University of Michigan Health System-led study.

The study revealed that nearly half (46%) of physician practices do not meet national standards to qualify as a medical home.

"Our study findings are particularly worrisome because the medical home model of care is seen as providing higher quality, more cost-efficient care" said John Hollingsworth, MD, MS, the lead author

who conducted the study as a Robert Wood Johnson Foundation Clinical Scholar at the University of Michigan. "Ideally, medical homes will help keep patients with chronic diseases from getting lost in the shuffle of our complex, fragmented health care system, yet a growing number of patients do not have access to them."

The study authors mapped physician practice data from the National Ambulatory Medical Care Survey to the National Committee on Quality Assurance's standards for medical homes. They found that larger, multi-specialty groups have a greater potential for meeting medical home standards, but nine out of 10 Americans receive health care from physicians who practice in smaller, single-specialty groups.

The 2010 health care reform law provides incentives to build medical home capacity with the goal of improving care and controlling costs. Federal support for electronic health records and higher reimbursement rates for medical homes are intended to gradually increase the number of medical homes. Yet, Hollingsworth says that current market forces could push health care practices that do not have the infrastructure to be medical homes in the opposite direction and cautions that the push toward medical homes could inadvertently cause some practices to close and further restrict access to care, especially in rural areas.

The researchers' findings also suggest that health care disparities could be exacerbated because vulnerable populations, such as patients living below the poverty level, often see doctors in practices that do not meet standards for becoming a medical home.

"Patients from the poorest neighborhoods visit practices that do not meet medical home standards at higher rates than those in the more affluent neighborhoods," says Hollingsworth, an Assistant Professor of Urology at the U-M Medical School. "These people are already economically disadvantaged and, on top of that, they wouldn't have access to the potentially higher quality of care offered by this delivery system reform."



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Hollingsworth and his coauthors urge policy-makers "to address the challenges facing smaller practices" in order to "make the benefits of medical homes more equitable and widely accessible."

They suggest legislative incentives to help solo or small practices to affiliate with larger physician organizations, practice team-based care, and adopt health information technology. They also recommend initiatives that would enable regional centers to facilitate medical home reforms in less populated areas.

The study, "Adoption of Medical Home Infrastructure Among Physician Practices: Policy, Pitfalls, and Possibilities," was published online on October 18 in the journal *Health Services Research*. It is part of a special issue on "Bridging the Gap Between Research and Health Policy" featuring research articles from current and former Robert Wood Johnson Foundation Clinical Scholars that will be released in print in February 2012.

Additional Authors include: Sanjay Saint, MD, MPH; Rodney A. Hayward, MD of U-M and the VA Ann Arbor Healthcare System; David C. Miller, MD, MPH; Joseph W. Sakshaug, MS of U-M, and Lingling Zhang, MA of Harvard Business School.

For more information, visit <http://rwjccsp.unc.edu>.

### New Study Shows Promise for Preventing Preterm Birth

A new study co-authored by the University of Kentucky's Dr. John O'Brien found that applying vaginal progesterone to women who are at a high risk of preterm birth significantly decreased the odds of a premature delivery.

The new study, published in the *American Journal of Obstetrics and Gynecology*, described a two-prong strategy used by doctors: participating pregnant women underwent a measurement of the cervical length via transvaginal cervical ultrasound to define risk for preterm birth; and those found to have a short cervix were

successfully treated with vaginal progesterone. A short cervix — defined as a length of 25 millimeters or less — is a major risk factor for preterm birth.

Approximately 12.9 million births worldwide are preterm which is defined as less than 37 weeks of gestation. The United States has the highest rate of preterm births in the world. "Early" preterm births -- those less than 32 weeks -- are associated with a high rate of neonatal complications and long-term neurologic disability. "Late" preterm births (between 34 and 36-6/7 weeks) represent 70% of all preterm births; and although they have a lower rate of complications than early preterm births, they are still a major health care problem.

The study showed that the vaginal application of progesterone gel significantly reduces the rate of preterm birth in women at less than 33 weeks of gestation, but also is effective at less than 28, 32 and 35 weeks. This means that vaginal progesterone reduces both "early" and "late" preterm births.

Vaginal progesterone administered to women with a short cervix detected via ultrasound also reduced the rate of admissions to the newborn intensive care unit; Respiratory Distress Syndrome; the need for mechanical ventilation; and a composite score of complications that included intracranial hemorrhage, bowel problems, respiratory difficulties, infection and death.

O'Brien, Division Chief of Maternal-Fetal Medicine at UK, says the progesterone treatment is safe because the natural pregnancy hormone is the made by the placenta and the ovaries during pregnancy.

"For too long, little progress has been made in the prevention of premature births," said O'Brien. "However, this new large study shows that it's possible to both help women determine if they are at risk for preterm birth, and provide a safe and effective treatment to help prevent preterm births."

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# Global Neonatology Today Monthly Column - As the Year 2011 Comes to an End....

By Dharmapuri Vidyasagar, MD, FAAP, FCCM

## The Good News from India

The recent Sampling Registration System (SRS) released in India show encouraging data. In 2010, at the national level, the Infant Mortality Rate (IMR) dropped to 47 infant deaths per 1,000 live births in 2010 from 50 in 2009. There was a decline of 4 points in rural areas (from 55 to 51), in contrast to a decline of 3 points in the overall IMR in 2010 (from 34 to 31 in 2009). Eleven of 29 states showed a decline of more than the national average (i.e. decline of more than 3 points). It is interesting to note that in states where IMR dropped more than the national average, there was a larger decline in IMR in their respective rural areas!

## The Encouraging News from Nigeria

Dr. Gbade Olateju a Consultant Anaesthetist at Obafemi Awolowo University Teaching Hospital Complex, Ile-ife, Nigeria reported in an open discussion group, Dgroups.org, on HIFA2015 (Health Information For All by 2015) wrote, "I read with pleasure in a Nigerian Newspaper (Sunday Punch) of December 25, 2011 the reports on Ondo State Government of Nigeria's initiative that is using mobile phones to save the lives of pregnant women. The phone is popularly known as Abiye phone. Abiye, in Yoruba language means 'Safe delivery.' In this pilot scheme, every pregnant woman that presented for antenatal care booking is given a mobile phone with a health worker assigned to do the follow-up, thus protecting pregnant women from maternal illnesses and complications. The pregnant woman is able to talk free-of-charge to her nurse anytime she is sick."

"In 18 months, at least 200 babies have been delivered with no maternal or foetal (fetal) mortality according to the reports. The assistance given by WHO in this project is commendable, and I wish that this kind gesture would spread to other local government areas where maternal and

foetal care is poor. Not minding the shortcomings of Abiye phone, whereby the husband can collect the phone and turn it into personal or commercial use; all husbands should be involved in the programme to minimise this problem."

That is encouraging news for the year 2011. However, there is much to be achieved as Dr. Ros Davies, Executive Director of Women and Children First ([www.wcf-uk.org](http://www.wcf-uk.org)), reminds us, "As we draw towards the end of the year, this Christmas Day, one thousand women will die in childbirth. One thousand women will die this way on Boxing Day too." [*Boxing Day is public holiday observed by many Commonwealth nations; it usually falls on December 26th*]. In fact, one thousand women die every day while pregnant or giving birth. The vast majority of these deaths could be prevented by the provision of simple information and equipment, which many of us take for granted."

Let us hope we can achieve even better results by the end of 2012.

**The MDG 2015 (Millennium Development Goals) Clock is ticking!**

NT



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ISSN: 1932-7129 (print); 1932-7137 (online).  
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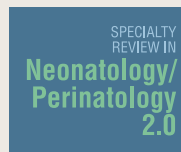
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