PHILIPS

Mother and child care

Avalon

Delivering
the next generation

Enhance the birth experience
with Avalon

A new addition to any family is always welcome – especially when it's the next generation of Philips Avalon fetal monitoring solutions. Avalon now includes a wealth of technical advances that make it fast and easy to access up-to-the-minute information on the health of mothers and their babies during pregnancy, labor, and delivery. So you can make informed decisions and provide the best care possible.

Avalon fetal and maternal monitors and the Avalon CL cableless system work together to help you watch over mothers and their babies at this important time of life. Discover how this family of breakthrough solutions can provide a more rewarding experience for mother, baby, and you.

Advanced fetal monitoring with Smart Pulse

Avalon fetal and maternal monitors are the first and only to use Smart Pulse for coincidence detection to reduce confusion between fetal and maternal heartbeats – even for twins and triplets. This breakthrough technology automatically measures maternal pulse via the Toco+ MP transducer without the need to monitor maternal SpO_2 or ECG separately.

Our advanced, compact systems also offer optional Non-Stress Test (NST) Trace Interpretation, a clinical decision support application designed to improve efficiency and streamline workflow in antepartum monitoring. Printed NST reports are available on the fetal heart rate strip automatically or on demand.

A comprehensive family

Philips Avalon monitors and our Avalon CL cableless monitoring solutions set a new standard for performance, flexibility, ease of use, and patient experience – from prenatal check-ups to intrapartum monitoring of high-risk pregnancies.

More monitoring options

If you don't want a transducer or transducer belt, or if they would be difficult to use, for example if you have high BMI patients, there is now an alternative. The Avalon beltless fetal monitoring solution works with your Avalon fetal and maternal monitor, keeping your current workflow intact.
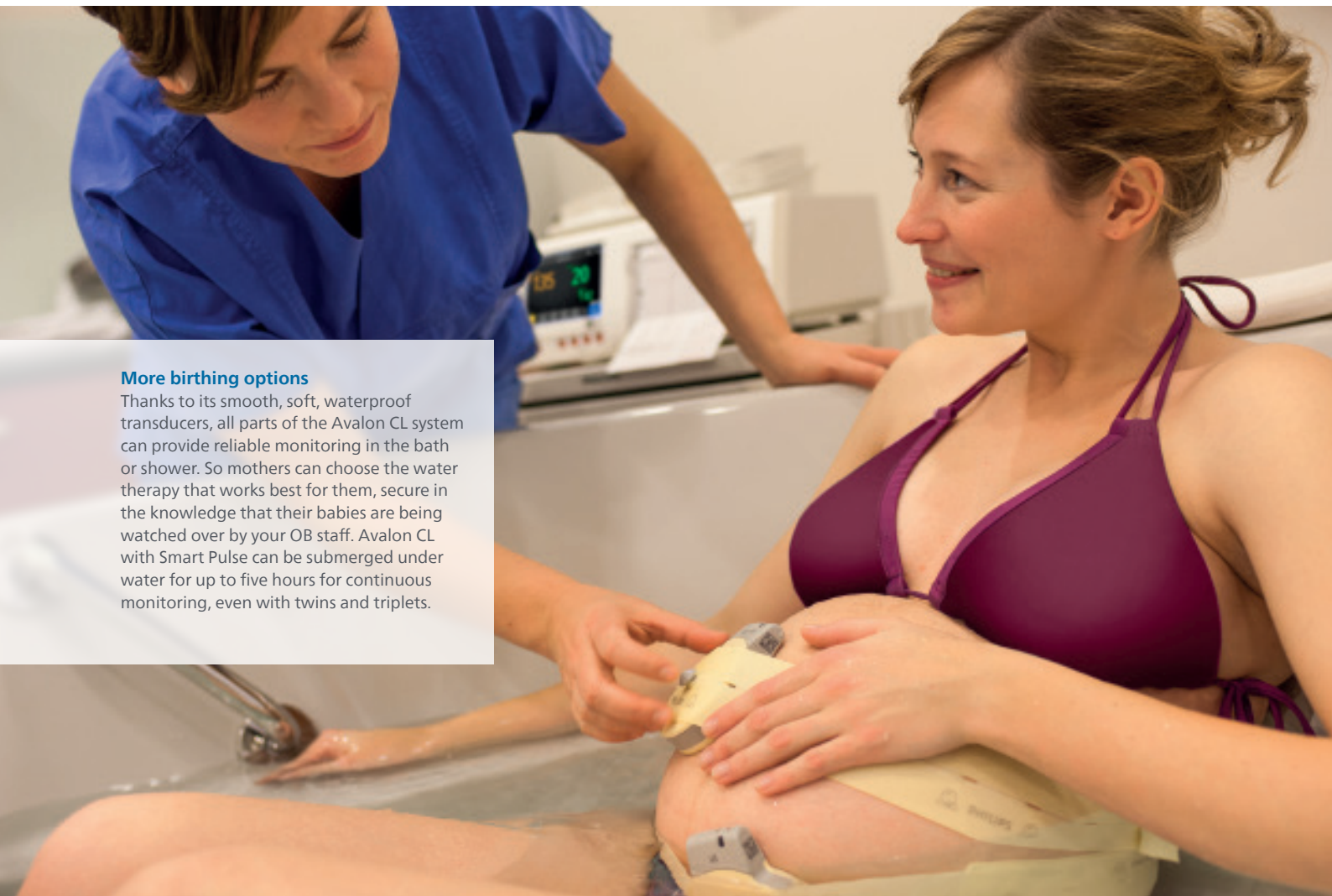
Keep track
of mothers on the move

The Avalon CL cableless fetal monitoring system helps transform labor and delivery by feeding continuous vital information to fetal monitors, while giving expectant moms freedom to move during labor - even to the furthest reaches of your WLAN.

It measures and transmits fetal movement and heart rate, uterine activity, and fetal or maternal ECG, so you know how mother and baby are doing when they're on the move. Avalon CL is designed to work with Philips Avalon monitors. Its cableless transducers transmit fetal and maternal vital signs information to a monitor via the base station - or over your WLAN, using the Avalon CL Wide Range Pod. From there, patient information is transferred to our Philips IntelliSpace Perinatal information management system.

More birthing options
Thanks to its smooth, soft, waterproof transducers, all parts of the Avalon CL system can provide reliable monitoring in the bath or shower. So mothers can choose the water therapy that works best for them, secure in the knowledge that their babies are being watched over by your OB staff. Avalon CL with Smart Pulse can be submerged under water for up to five hours for continuous monitoring, even with twins and triplets.

Cableless monitoring is here

The Avalon CL Transducer System provides cableless monitoring with the Avalon FM20/FM30 and FM40/FM50. It delivers the same functionality and performance as the wired measurement devices. The transducers can easily be clipped, secured and repositioned, allowing freedom of mobility for mothers, while measuring up to three fetuses.

- The **CL Ultrasound transducer** measures fetal heart rate and fetal movement.

- The **CL Toco+ MP transducer** measures uterine activity, maternal pulse, and either maternal ECG, fetal ECG, or IUP.

- The **CL ECG/IUP transducer** measures either maternal ECG, fetal ECG, or intrauterine pressure (IUP).

- The **beltless fetal monitoring solution** measures fetal heart rate, maternal heart rate and uterine activity, for patients with high BMI or when a belt is not practical.

Support for freedom of movement.
The Avalon CL Wide Range Pod extends monitoring of the whole selection of cableless measurements to the full reach of your WLAN.

Avalon CL Fetal & Maternal Pod and Patch

"Our main aim is to deliver more choice for women in labor. We want mothers-to-be and their babies to benefit from the advantages of being mobile and upright in labor, while also providing the best possible birth experience."

Dawn Morrall
Assistant Divisional Director of Midwifery
Gloucestershire Royal Hospital

Avalon Wide Range Pod

Cross-checking
when it counts

The ability to identify fetal and maternal heartbeats with certainty is critical to making informed clinical decisions during labor and delivery.

How Smart Pulse works

Avalon CL's Smart Pulse technology provides peace of mind. It continuously delivers the maternal pulse to detect coincidence between maternal and fetal heart rates – even for twins and triplets. Built-in cross channel verification in Avalon FM monitors automatically compares the maternal pulse and multiple fetal heart rates to make sure separation is maintained. This helps to reduce the possibility of mistaking one heartbeat for another, plus it provides you with a factual basis for accurate recognition and timely intervention.

Since Smart Pulse is built into the Toco+ MP transducer, there's no extra setup required and no impact on clinical workflow.

Philips Avalon FM series antepartum and intrapartum monitors provide:

- Separate maternal pulse measurement
- Continuous monitoring during transport in healthcare facilities
- Integrated monitoring of maternal pulse rate and blood pressure (optional)
- External monitoring of multiple fetal heart rates, uterine activity, and fetal movement
- An extensive set of internal fetal parameters, such as direct fetal heart rate and intrauterine pressure
- Optional maternal SpO_2

"Erroneous recording of maternal heart rate as fetal during the second stage of labor may lead to perinatal morbidity and mortality due to non-recognition of intrapartum hypoxic insult to the fetus." [1]

1. Nurani R, et al. "Misidentification of maternal heart rate as fetal on cardiotocography during the second stage of labor: the role of the fetal electrocardiograph." Acta Obstet Gynecol Scand. (2012): 91.

Highlights
of Avalon rev J.3 and L.3

Philips Avalon FM series monitors drive technical innovations and interface advancements to help improve clinical workflow and connect caregivers with to up-to-date patient information and each other.

Streamline clinical workflow

- **Cableless monitoring**. The Avalon CL transducer system provides cableless monitoring with all four Avalon FM series monitors, so moms can move freely during labor. It continuously monitors maternal and fetal heart rates for twins and triplets.

- **Automatic temperature measurement**. The optional tympanic thermometer automatically records and transmits a mother's temperature to the IntelliSpace Perinatal information system and your EHR via the MIB interface.

- **Manual temperature entry**. Maternal temperature can be entered at the fetal monitor for a more comprehensive Electronic Medical Record.

- **More frequent SpO$_2$ transmission**. Send SpO$_2$ numerical values to an obstetrical information system every minute or every 5 minutes.

- **Tailor NBP sequences**. Set up to four measurement cycles and the time intervals between them to meet the medical needs of your patient, your unit's protocols – and transmission to the Philips IntelliSpace Perinatal information system and your EMR via the MIB Interface.

- **Monitor during transport**. With an extended 7-hour trace buffer, there's no need to worry about monitor downtime or lost patient information due to power outages, during hospital transport, or while traveling from place to place.

- **Type a note.** Enter free text notes, for inclusion on the paper trace, IntelliSpace Perinatal and in the Electronic Medical Record.

- **Battery operable fetal monitor.** The battery option E25 for the FM20/30 provides support for minimum 4 hours of in-transport monitoring of all measurements when disconnected from a power supply. Even during battery operation, the Avalon CL Fetal & Maternal Pod can be charged, assigned and activated.

- **Extended functionality.** Get the convenience of the 'Call patient' and 'Find' on the CL Fetal & Maternal Pod.

Enhance communication

- **Audible coincidence alarms**. Now Avalon FM series monitors alarms indicate coincidence of heart rates between mother and baby with sound, as well as on screen.

- **Enhanced alarm management**. Key alarms like ECG leads off, NBP cuff deflated, battery empty, and no SpO$_2$ pulse can be color coded to indicate severity. And alarm reminders emit an audible tone for active alarm conditions.

- **Expanded patient surveillance**. When an ambulating mother starts to wander out of range, she receives an audible warning on her patient-worn CL transducer. Clinicians can also use a SmartKey on the monitor to call the mother back.

- **Flexible nurse calls**. Alarms generated on an Avalon FM series monitor can be signaled on external devices such as a nurse call system, a beeper, or a light.

An updated
look and feel

The enhanced user interface on all Avalon FM monitors puts the most important information where you need it **– in the foreground.**

SmartKeys simplify access and speed workflow.

Bright, colorful 6.5˝ (16.51 cm) display has large numbers and graphics.

Transducers plug and play with automatic screen layout.

Built-in 6-inch high-resolution thermal array recorder detects paper type. (FM 40/50).

Perinatal
information management

Managing clinical information throughout one or more pregnancies is a big challenge. Avalon FM series fetal monitors and cordless transducers connect to IntelliSpace Perinatal, Philips obstetrical surveillance and information management system. It provides a single, centralized electronic patient record system that integrates with your Electronic Medical Record to enable you to utilize your systems appropriately.

Advanced IT connectivity

• **Accelerate IT productivity**. DHCP support enables Avalon FM fetal monitors to automatically request an IP address from a connected network service, like that included in IntelliSpace Perinatal, Philips obstetrical surveillance and information management system.

• **Tight EHR integration**. Connect Avalon FM monitors via a LAN connection with IntelliSpace Perinatal to your obstetrical information and surveillance system, and use the RS232 interface to access your EHR system on a read-only basis.

• **Comprehensive documentation**. Operating modes like 'Demo' or 'Standby' are now transferred to IntelliSpace Perinatal.

• **Know where your patients are.** The CL Wide Range Pod works with IntelliSpace Perinatal to provide you with patient location tracking.

• **Operate your fetal monitors remotely.** IntelliVue XDS Remote Display functionality (with IntelliSpace Perinatal Revision K or higher) enables remote access to all screen-operable functions of the LAN connected fetal monitor. These functions include starting and stopping physiological measurements, changing alarm limits, and silencing alarms..

Which Avalon fetal monitors are right for you?

Philips Avalon FM20 and FM40 monitors provide comprehensive external fetal monitoring, as well as optional noninvasive maternal vital signs.
The Avalon FM30 and FM50 monitors both add internal fetal monitoring.
This chart can help you decide which mix of Avalon FM monitors is best for your labor and delivery department.

	FM20	FM30	FM40	FM50
Care stage	Antepartum	Intrapartum	Antepartum	Intrapartum
Patient type	Fetal and maternal	Fetal and maternal	Fetal and maternal	Fetal and maternal
ECG	MECG	DECG, MECG	MECG	DECG, MECG
Waveforms	No	Standard	No	Standard
External fetal parameters	US, Toco	US, Toco	US, Toco	US, Toco
Twin capability	Standard	Standard	Standard	Standard
Triplets capability	Optional	Optional	Optional	Optional
Internal fetal parameters	N/A	DECG, IUP	N/A	DECG, IUP
Maternal parameters	MECG, Pulse. Optional: NBP	MECG, Pulse. Optional: NBP, SpO_2	MECG, Pulse. Optional: NBP, SpO_2	MECG, Pulse. Optional: NBP, SpO_2
Smart Pulse technology	Standard	Standard	Standard	Standard
Cross channel verification	Standard	Standard	Standard	Standard
Fetal movement profile	Standard	Standard	Standard	Standard
System interface	Serial, LAN (optional)	Serial, LAN (optional)	Serial, LAN	Serial, LAN
PS/2 interfaces	Optional	Optional	Optional	Optional
USB interfaces	Optional	Optional	Optional	Optional
Monitor screen display	6.5″ (16.51 cm)	6.5″ (16.51 cm)	6.5″ (16.51 cm)	6.5″ (16.51 cm)
Touchscreen operation	Standard	Standard	Standard	Standard
Video out interface	N/A	N/A	Standard	Standard
External touch interface	N/A	N/A	Optional	Optional
Rear interface for Avalon CL	N/A	N/A	2	2
NST timer	Standard	Standard	Standard	Standard
NST trace interpretation (optional)	For up to three FHRs	For up to three FHRs	For up to three FHRs	For up to three FHRs
Data buffer (standard)	Minimal 7 hours	Minimal 7 hours	Minimal 7 hours	Minimal 7 hours
Battery operating time (optional)	Minimal 4 hours	Minimal 4 hours	N/A	N/A
Weight	11.2 lbs (5.1 kg)	11.2 lbs (5.1 kg)	< 19.8 lbs (< 9.0 kg)	< 19.8 lbs (< 9.0 kg)
Weight with battery option	11.7 lbs (5.3 kg)	11.7 lbs (5.3 kg)	N/A	N/A

Philips Avalon fetal monitoring solutions:
it's all in the family

Philips offers a variety of compact carts to help streamline workflow. Optional touchscreen remote displays make it easy to view up-to-the-minute maternal and fetal data.

Better together!
Complement and enrich your patient monitoring solutions throughout their lifecycle with a broad range of services and supplies.
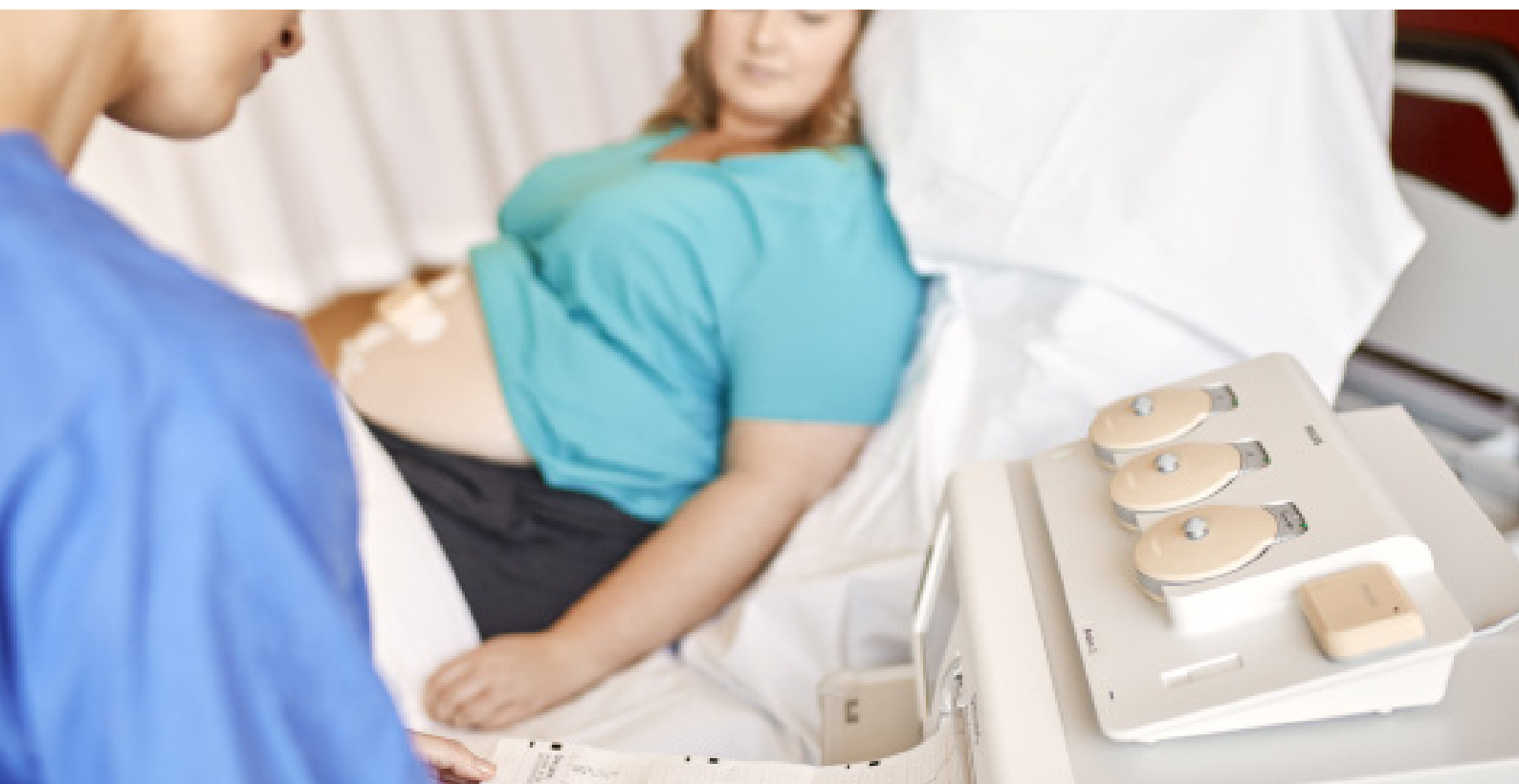
Extensive services
We support you with your entire patient monitoring solution with our comprehensive services.

Orginal supplies
We have the supplies to complement your monitoring equipment.

Choose between trace interpretation support using either NICHD guidelines, or Dawes/Redman criteria

www.philips.com

4522 991 71261 * AUG 2021