# BWGIC Activity Report 2015

## Quality control in percutaneous coronary intervention (PCI) and trans-catheter aortic valve implantation (TAVI)

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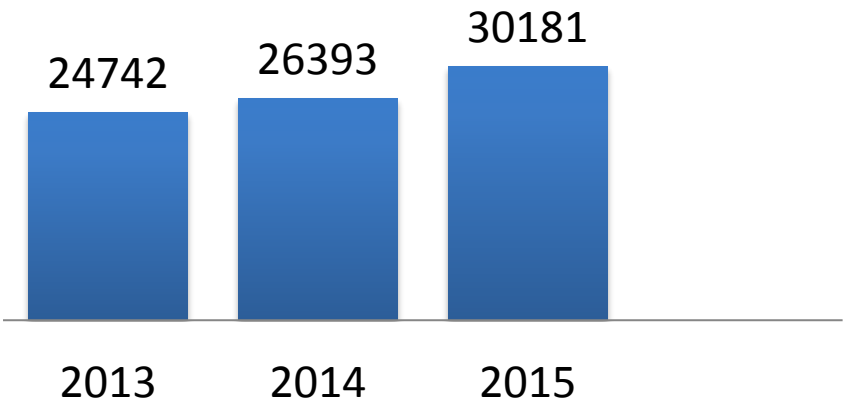
Quality control was conducted in these two main domains of interventional cardiology (PCI and TAVI) using the existing databases: respectively QERMID for PCI and the newly developed TAVI database (Lambda plus). Additionally, the Belgian working group on invasive cardiology (BWGIC) took some initiatives aimed to promote quality in the progressive implementation of innovative interventional therapies such as left atrial appendage closure and percutaneous mitral valve therapies.

### PCI

The QERMID team gave access to PCI data from February 2012 to April 2016. Data were transmitted in several excel sheets, each of them containing a subset of original data and sequence codes allowing to make a link with the other sheets. This type of presentation is sufficient for basic analyses such as the number of PCI (total, per center or per operator), proportions of indications, comorbidities or mean outcome of the general population but does not allow more sophisticated analyses such as the evaluation of outcome for each operator or center after risk adjustment for comorbidities. For the purpose of quality control and peer review, the QERMID database thus remains much less effective than the previous (BWGIC-owned until 2012) database. In addition, we are still expecting a link with the national registry in order to validate survival data beyond hospital stay. Despite these limitations, the situation considerably improved compared to 2013 and 2014.

Main data from the QERMID database:

The total number of PCI performed annually in Belgium increased from 24742 in 2013 to 30181 in 2015 (+22%).



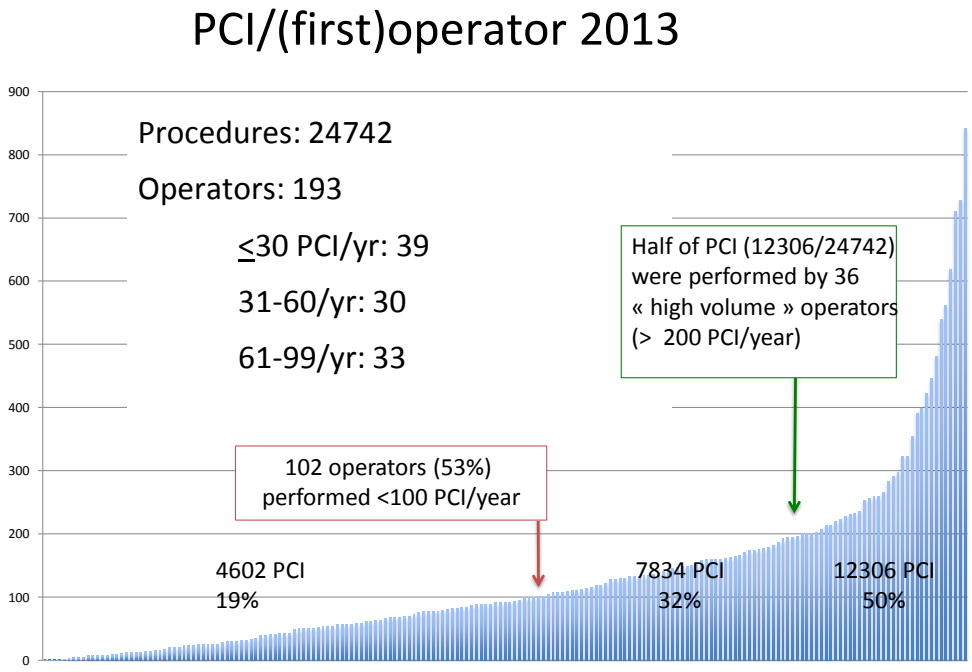
Based on reported indication, this increase was mainly related to acute coronary syndromes; PCI for stable angina increase by only 9% while direct PCI for STEMI increased by 49% from 2013 to 2015. Other indications related to acute coronary syndromes (STEMI late, STEMI rescue and NSTEMI increased by 30-35%). Since the number of STEMI is unlikely to have increased in such a proportion and considering the fact that direct PCI was already the preferred method of revascularization for STEMI in Belgium, this 49% increase requires further analysis: it could reflect a shift from thrombolysis to direct PCI (with an almost complete disappearance of thrombolysis) but also an inappropriate use of this definition.

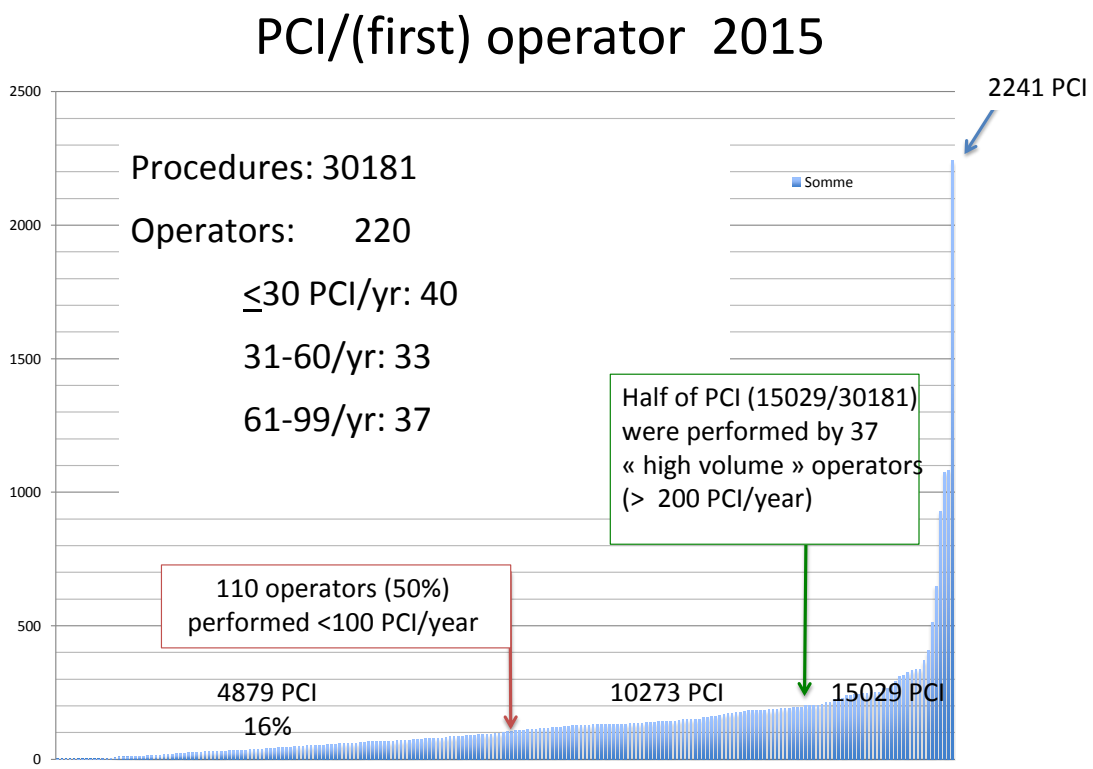
# Indication for PCI

| | | | | | | | | when re-intervention | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Stable AP | STEMI direct | STEMI rescue | STEMI late >12h | NSTEMI « urgent » <24h | Emergent PCI UAP | Complication of previous PCI | Staged | Recurrence of ischemia |
| **2013** | 24742 | 13613 | 3668 | 115 | 415 | 1908 | 1877 | 75 | 172 | 1877 |
| **2014** | 26393 | 14247 | 4012 | 102 | 481 | 2111 | 1767 | 60 | 223 | 1767 |
| **2015** | 30181 | 14816 | 5469 | 155 | 550 | 2480 | 1866 | 61 | 337 | 1866 |
| 2013 to 2015 | +22% | +9% | +49% | +35% | +33% | +30% | -1% | -19% | +96% | -1% |

The increase in the number of PCI was associated with the increase in the number of PCI centers and of operators. Comparison of the individual workload per operator from 2013 to 2015 shows that about half of PCI operators perform annually less than 100 PCI (accounting for <20% of the total number of PCI) and that more than 50% of PCI are done by operators performing >200 PCI/year. Proportions remain similar from 2013 to 2015 despite an increase in absolute values.

Some operators report an unusually high volume of procedures per year, suggesting that identification of the first operator is not always 100% correct.




Among other meaningful data extracted from the QERMID database, the proportion of radial access for PCI gradually increases (overcrossing the proportion of femoral access in 2014), the use of DES is dominant (65% DES vs 29% BMS) in accordance with the guidelines and despite a limitative reimbursement and the hospital mortality is constant at 2.2%.

## TAVI

The “TAVI task force” created in association with the Belgian association for cardiothoracic surgery (BACTS) participated to the development of a national registry. An interim report was presented in October 2015 (TAVI task force meeting) and to INAMI/RIZIV by the BWGIC and BACTS in December 2015. Overall, device success was high (96%) and the survival rate at 1 and 6 months after TAVI is in agreement with other national registries. More data are expected in 2016 since data completion is now required for reimbursement of the aortic prosthesis.

## Communication with centers

Every year, PCI data are presented to all members during the general assembly (spring meeting of the BWGIC, 12 June 2015). In addition, a newsletter was addressed to all members in December 2015 summarizing some results of the QERMID data base, preliminary data from the newly created TAVI registry and propositions for an optimal implementation of left atrial appendage closure in the Belgian interventional centers.